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SPINAL DECOMPRESSION

REPORTS OF SEVEN CASES AND REMARKS ON THE DANGERS OF AND JUSTIFICATION FOR EXPLORATORY OPERATIONS *

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We desire to call attention to the relief of symptoms which followed the removal of the spines and laminæ and the incision of the dura in seven cases of spinal disease.

The improvement in most of the cases was very striking, although in two the changes in symptoms which followed the operation could not be construed as benefits to the patient. In one patient, severe pain of three years' duration was promptly relieved; in another there was almost complete recovery from the symptoms of a lesion at the level of the eighth dorsal segment, an atypical Brown-Séquard syndrome with unilateral sensory loss and spastic motor palsy of both lower limbs (Case 2); in a third disappearance of an unilateral sensory and spastic motor paralysis of one leg (Case 3). In one patient (Case 4) only temporary changes in the symptoms occurred; these were of physiologic interest, but without practical benefit to the patient. In a case of infiltrating tumor of the cauda equina (Case 5) the pain disappeared and the anesthesia grew less; in a case of intramedullary tumor the patient, bedridden before the operation, regained the power of walking without assistance (Case 6); in still another, the anesthesia grew less (Case 7).

We have arranged our cases in three classes: (1) those in which nothing pathologic was found within the dura and in which the operation was followed by the complete disappearance of all the symptoms (Cases 1, 2, 3); (2) cases in which nothing was found at operation, which was followed by temporary marked improvement (Case 4); and (3) cases in which a tumor was found which could not be (Case 5), or could only partially be (Cases 6 and 7), removed.

We are fully aware that in the last two patients (6 and 7) the improvement which followed the primary operation was actually due to the decrease in the intradural pressure after the free removal of spinous processes and laminæ and incision of the dura. These are instances of true spinal decompression, and we have included them in the present paper because, in direct contrast to the other cases, they demonstrate the benefits that may follow a laminectomy when the intradural pressure is markedly increased. But in the five other cases there was no evidence of an increase of intradural pressure. In these five patients the improvement observed — both in symptoms of functional character such as pain, and in organic symptoms such as paralyses, anesthesias, etc.—leaves no room for doubt that surgical exposure of the spinal cord, even in the absence of increased intradural pressure, may effect some change which temporarily or permanently benefits or checks the symptoms of local spinal cord disease.

We are not in a position to offer a physiologic explanation of the phenomenon, although it is probably connected with the circulation in the cord itself. The infrequency of autopsies in these cases throws the burden of explanation on experimental work. In Allen's experiments[1] on spinal injuries in dogs, drainage of the spinal cord seemed the condition necessary for recovery. Before Allen, Horsley had expressed the view that "probably many cases of so-called acute myelitis are really meningeal in origin, and that a laminectomy and free drainage of the subdural space might arrest the whole process and the subsequent fatal injury which the cord sustains in such cases."

It may be that in the cases we now discuss, the operation of laminectomy and incision of the dura effected vital changes in the blood-supply of the cord, or exerted a beneficial influence by the admission of light and air, analogous to the effect of laparotomy in tuberculous peritonitis. In most of our cases the operation went no further than an exploratory laminectomy with opening of the dura, and we have ascribed the resulting changes in the symptoms to the effects of spinal decompression. We have made use of this term "spinal decompression" as a convenient means of expression, realizing fully that in five of our cases the results from the operation were not entirely analogous to the results of cerebral decompression.

Whatever the explanation may be, the facts struck us as worthy of attention, and we began to inquire if such effects had not been recorded before. We soon found, scattered throughout the literature on spinal cord tumor, reports of cases in which relief of symptoms, notably pain, followed operations undertaken for spinal cord tumor, when no tumor was removed. The most suggestive paper on this subject is a clinical lecture by Sir Victor Horsley[2] entitled "Chronic Spinal Meningitis." By this he understands an affection of the spinal meninges with some sclerosis and wasting of the cord, usually, though not always, syphilitic in character. The symptoms are those of a progressive sensorimotor paralysis, practically indistinguishable from the symptoms of spinal cord tumor.

* Read at the meeting of the New York Neurological Society, Jan. 2, 1912.

1. Allen: THE JOURNAL A. M. A., Sept. 9, 1911, p. 878.
2. Horsley, Sir Victor: Brit. Med. Jour., 1909, 1, 513.

Horsley gives but few cases in detail, although he refers to twenty-one operations, and he calls the condition more frequent than spinal cord tumor. The facts he advances are too few to permit the reader to accept unqualifiedly his diagnosis of chronic meningitis and are entirely inadequate to convince one that they are of syphilitic origin. Nor do we know of any form of meningitis, whether syphilitic or not, which a single irrigation with sublimate solution will cure, when previous antisyphilitic remedies have failed. After a careful reading of Horsley's paper, we are forced to the conclusion that the benefits to the patients observed by him resulted directly from the laminectomy, no matter what the clinical diagnosis may have been.

Horsley does not state the percentage of his cases in which the cerebrospinal fluid was increased. This point is extremely important for the present discussion, as we here maintain that laminectomy may benefit whether there is such an increase or not. The success attendant on draining serous meningitis or arachnoid cysts which cause focal symptoms has been demonstrated by Krause, Spiller, Schlesinger and others. In these cases the operations act through the removal of a "foreign" body. The cases we refer to are especially benefited when there is neither a foreign body to remove nor increased intradural pressure to relieve. What the anatomic character of the lesions in these cases is, we are in no position to define. They are probably not all the same. Some are doubtless meningitic in character; others may be in the nature of localized sclerosis; in one of our cases, the symptoms were directly connected with a localized osteoarthritis of a vertebra.

Whatever the nature of the lesions may be, the time has come for neurologists to recognize that there are a number of subacute intradural conditions that may present symptoms so similar to those of tumor of the spinal cord that they cannot, at present, be distinguished from them, and that these symptoms may be partially or completely relieved by the simple opening of the dural sac.

Under these circumstances, and with this therapeutic potentiality attached to it, exploratory laminectomy acquires a new importance, and as soon as this operation can be shown to be comparatively free from danger it should be recommended with much greater freedom than has been done in the past. In none of our cases, however, was the operation purely exploratory or undertaken with decompression as the sole end in view. In three cases the diagnosis of tumor was made and the tumor was found and could be either not at all or only partially removed; in three others the diagnosis was made, but no tumor was found. In one the operation was undertaken at the patient's urgent request, for the purpose of diagnosis.

Laminectomy must always be classed as a major operation, but much of the gravity associated with it is due to the life-threatening conditions for which it is undertaken. Except for section of the posterior roots for spasticity and pain, the laminæ are removed by the surgeon only for conditions of the most serious character, most of them direct menaces to life. The burden of mortality, therefore, which appears in any statistics of laminectomies should be borne by the disorders for which the operations were undertaken, rather than by the operations themselves.

These facts should be held in mind when the statistics of laminectomy are under consideration. For example, Horsley operated in twenty successive cases without a death; in twenty-six operations reported by F. Krause, eight patients died as an immediate result of the surgical interference (37 per cent.). Harte collected records of ninety-two operations for spinal tumor, among which forty-three patients died (47 per cent.). McCosh claimed that the mortality should not exceed 10 per cent. Other writers have a mortality of from 20 to 50 per cent. One of us (Elsberg), in forty-two spinal operations, of which thirty-four were primary laminectomies, lost five patients (12 per cent.). Of the five patients who died, three were almost moribund at the time of operation. None of these three patients should have been operated on, and with our present knowledge none would have been. In the fourth case, the operation and autopsy revealed an infiltrating glioma of the upper cervical cord and medulla oblongata, a desperate and hopeless condition. The fifth patient had a fracture dislocation in the cervical region with extensive crushing and transverse division of the spinal cord.

If the cases of spinal cord disease or injury in which the surgeon attempts to remedy the irremediable or to operate on patients almost moribund, are left out of account, it will be found that laminectomy in experienced hands is neither a particularly hazardous nor a trying operation. In our experience, if the five cases just cited—all hopeless from the onset—were excluded, we would have done twenty-nine primary laminectomies without fatality, so that we have come to look on laminectomy in a patient in good condition as a fairly safe operation.

CONCLUSIONS

1. The free removal of spinous processes and laminæ with opening of the dura may have a profound effect on the spinal cord in certain pathologic conditions.

2. There are a number of intradural conditions which present symptoms as yet indistinguishable from those of spinal tumor.

3. Even in the absence of increased intradural pressure or a discoverable lesion, the operation of laminectomy and incision of the dura may be of great benefit.

4. For the reasons above stated and on account of its relative safety in experienced hands, exploratory operations should be done more often.

CASE REPORTS

1. NOTHING ABNORMAL WITHIN THE DURA; COMPLETE RELIEF AFTER THE OPERATION

CASE 1.[3]—Paraplegia dolorosa of three years' duration. Osteochondritis twelfth dorsal vertebra. Operation. Recovery.

Patient.—M. S., aged 40, single, American, driver, was admitted to the Neurological Institute of New York, service of Dr. Bailey, March 29, 1910. Three years before admission the patient began to have pain in the lower part of the back, coming on in attacks, and which radiated down the legs. During the past year it had become more severe and especially pronounced in the left leg, which also had become weaker, and recently there had been difficulty in walking on account of the pain. At no time had there been disturbance of the bowels or bladder. Erections were frequent and painful.

Examination.—There was marked rigidity of the whole dorsolumbar spine with distinct tenderness to pressure over the lower part of it with point of greatest tenderness over the second lumbar vertebra; also tenderness on deep pressure over both sciatics. The legs showed neither paralysis nor atrophy, though there was great interference with muscular power on account of the pain. The right knee-jerk was lost. The left was diminished.

3. Also reported in Jour. Nerv. and Ment. Dis., November, 1911.

There was hypesthesia and hypalgesia from the level of the twelfth dorsal distribution down; no disturbance of thermic sense except perhaps at the upper level of the sensory lines.

Operation.—April 2, 1910, Dr. Elsberg performed a laminectomy, removing the spines and laminæ of the tenth, eleventh and twelfth dorsal and first and second lumbar. The laminæ of the twelfth dorsal were found thickened, abnormally soft and grayish in color. Pathologic report of the bone removed showed a chronic osteochondritis with new bone formation. The dura was slightly congested but was otherwise normal, and the cord appeared normal. The relief from pain by this operation was almost immediate. Within a few days the patient complained of only slight pain and could move the lower limbs freely.

Postoperative History.—April 28, when the patient was discharged from the hospital, there was no longer any pain; the anesthesia had almost entirely disappeared and the patient walked freely. Both knee-jerks were absent at this time, and the right sciatic nerve was still tender to pressure. The patient was reexamined May 18, 1910; he walked erect, without peculiarity of gait, without discomfort, and with only slight soreness in the posterior side of right thigh, "as if he had been beaten there with a stick." This sensation was not present all the time but came irrespective of motion or rest. He still had painful erections. The knee-jerks were still absent.

May 24, 1910, the patient was again examined and both knee-jerks were found to be present and equal.

The last report, of Jan. 2, 1911, was by letter from the patient, who is in California in the horse business; "rides 30 to 40 miles a day on horseback and feels perfectly well."

CASE 2.—Suspected tumor of eighth dorsal segment. Laminectomy with negative findings. Complete recovery.

Patient.—Surgical No. 231. George M., aged 40, admitted to the Neurological Institute Nov. 1, 1910, on the service of Dr. Fraenkel, by whose courtesy we report this case. Six months ago the patient began to have pain in the middle of the back and at the same time he noticed that the right lower extremity was becoming weak. The pain in the back remained of moderate severity, but the right lower limb became stiffer and weaker. He had occasional shooting pains in the lower limbs and a sensation of a band around the middle of his body. From the beginning of his symptoms, the patient found that he had lost all sexual power. The symptoms grew gradually worse, and three months ago the left lower extremity began to be weak and stiff; at the same time he noticed that he had considerable difficulty in urination. Feeling in the lower limbs gradually became more and more impaired, he became unsteady, and had great difficulty in walking.

Examination.—Both lower extremities markedly spastic, abdominal and epigastric reflexes diminished. There was marked tenderness on percussion on the eighth dorsal spine. The knee-jerks and ankle-jerks were exaggerated, more on the left side; Babinski on the left side. The left lower extremity was decidedly weaker than the right. There was slight hypesthesia and hypalgesia of the entire left lower limb and back to the level of the fourth lumbar spine; on the right side all three sensations were markedly diminished to the same level. The Wassermann test was negative. As the diagnosis of spinal tumor seemed justified, the patient was transferred to the surgical department.

Operation.—December 1: Laminectomy by Dr. Elsberg. The spines and laminæ of the fifth, sixth, seventh and eighth dorsal vertebræ were removed, and the dura exposed. The dura was incised and the pia-arachnoid beneath found distended with fluid, which escaped when an incision was made, exposing a normal cord. All surfaces of the cord were carefully examined; a probe, passed upward and downward for a considerable distance, failed to meet any resistance, nor were any adhesions found between the membranes. Although the amount of fluid was large, it was not excessive, nor was it possible to demonstrate that it was a localized collection. The findings being practically negative, the wound was closed in the usual manner.

Postoperative History.—For several days after the operation both lower limbs were powerless; thereafter the improvement was very rapid and remarkable. Voluntary power in the lower extremities rapidly returned, the spasticity became steadily less, sensation in the limbs began to improve. Eighteen days after the operation, the patient was up and walking with a cane. Four weeks after the operation, he noticed that his erections and sexual desire had returned, the power in both lower limbs was good; most of the spasticity had disappeared. Excepting for a small area of hypesthesia and hypalgesia on the anterior aspect of the left thigh, sensation was everywhere normal. When he was discharged, February 8, his only complaints were slight "stiff feeling in the lower limbs at times." All sensory disturbances had disappeared. He returned to work, and has remained well up to the present time (one year after the operation).

CASE 3.—Suspected tumor of spinal cord. Laminectomy with negative findings. Complete disappearance of all spinal symptoms.

Patient.—Surgical No. 286. Adelpho C., aged 30, was admitted on the service of Dr. Bailey, Oct. 2, 1911. The patient is married and has seven children. About ten years ago he had an attack of severe pain in the back, lasting for eight days. Six years ago the pain returned and was most pronounced on the left side of the back. From that time he had attacks of the same pain every few months, up to three months before admittance to hospital, when the pain became very much worse, and had steadily increased in severity up to date of admittance. The patient stated that his right leg was weaker than the left and the pain in the back and left lower extremity had been very severe for the past two months. He noticed that he had no feeling in the right leg below the knee. The lower extremities gradually became weak and stiff so that he walked with great difficulty.

Examination.—On account of the patient's excruciating pain, which seemed to be limited to the distribution of the first and second lumbar posterior roots on the left side, examination was very difficult. Reflexes of the upper extremities were lively. Left abdominal reflexes present, those on the right side could not be elicited. The knee- and ankle-jerks on the left side were exaggerated; ankle-clonus, Oppenheim, Babinski, on left side. The motor power of the left leg was decidedly less than that of the right. There was a marked hyperesthesia on the twelfth dorsal and first lumbar root areas, most marked on the left side; there was a great diminution in all sensations on the right third and fourth lumbar areas of distribution. Wassermann and *x*-ray were negative.

Operation.—Laminectomy was performed by Dr. Elsberg, Oct. 6, 1911. The laminæ and spinous processes of the ninth, tenth, eleventh and twelfth dorsal, and the first and second lumbar vertebræ were removed in search for the suspected tumor. The pia-arachnoid was distended with fluid which communicated freely with the subarachnoid space above. The findings were entirely negative. Closure of wound in the usual manner.

Postoperative History.—The patient had had slight fever before the operation which persisted after the operation and ran an irregular course. Physical examination of the chest showed that there were suspicious signs of a tuberculous lesion in the left apex. Examination of the sputum was negative. The wound healed by primary union. The pain in the left hip disappeared soon after the operation. There was a steady improvement in all of the other symptoms. By October 28 (twenty-two days after the operation), all of the sensory disturbances had disappeared, and when he left the hospital, on November 4, the pathologic reflexes and the stiffness in the lower limbs were no longer present. Fever, cough and expectoration persisted.

II. NO GROSS LESION WITHIN THE DURA: TEMPORARY MARKED IMPROVEMENT

CASE 4.—Exploratory laminectomy, negative findings, temporary marked improvement in symptoms.

Patient.—Medical No. 606. Surgical No. 249. F. L. T., a man aged 26, clerk, was admitted on the service of Dr. Bailey, Sept. 19, 1910. The patient was an athlete and declared that

he was perfectly well until about one month before admission. Then he began to be unsteady on his feet, which was soon followed by numbness in the lower limbs. The limbs ached at times. The symptoms gradually progressed. He left the hospital in October, but returned on December 4 with all of the symptoms aggravated. At this time both lower extremities were spastic, with exaggerated knee- and ankle-jerks, clonus and Babinski. He now complained of burning sensations in his lower limbs and there was a diminution in all three sensations up to the level of the twelfth dorsal spine. After a short stay in the hospital he again left, only to return Jan. 8, 1911. The burning sensations in the lower limbs were worse and were accompanied by shooting pain in the left groin, the lower limbs were weak and spastic so that he could hardly drag himself around with help. There was some slight sexual disturbance. The right lower extremity was now weaker than the left; both knee-jerks were exaggerated, the right one more so. Ankle-clonus and Babinski were elicited on both sides, more marked on the right. Abdominal reflexes could not be elicited. There was a marked diminution of all three sensations below the tenth dorsal segment.

Operation.—On the patient's urgent request, no matter how poor the outlook, that he be given a chance by an operation, laminectomy was performed by Dr. Elsberg on January 20. The spinous processes and laminæ of the seventh, eighth, ninth and tenth dorsal vertebræ were removed. Incision of dura and exploration failed to reveal anything pathologic, excepting for the fact that the cord was of irregular consistency. There was no excess of cerebrospinal fluid. Closure of wound in usual manner. Recovery from the operation was without incident, excepting for the pressure of a very distressing hiccup for several days. The wound healed by primary union.

Postoperative History.—One week after the operation, the patient could recognize heat and cold on all parts of both lower limbs, and the hypesthesia and hypalgesia were much less marked. He was able to move his lower limbs much more freely; a great deal of the spasticity had disappeared. Patellar reflexes only slightly exaggerated, no ankle-clonus, no Babinski. Three and a half weeks after the operation there was still some improvement. He could move his lower limbs more freely, but the spasticity was as marked as before the operation, with patellar reflexes again exaggerated; there was bilateral ankle-clonus and Babinski on the right side.

The patient was discharged from the hospital two months later and became steadily worse. We regarded his case as one of multiple sclerosis.

III. INTRADURAL TUMOR FOUND: MARKED IMPROVEMENT AFTER THE PRIMARY LAMINECTOMY

Case 5.—Laminectomy for irremovable lipoma of cauda equina. Improvement.

Patient.—H. H., a woman aged 28, had had trophic ulcers on toes of left foot for a number of years, on account of which three of the toes were amputated between 1905 and 1908. She was admitted into Mount Sinai Hospital in July, 1908, on account of ulcers on the left heel and severe pain with sensory disturbances in both lower limbs, especially the left one.

Examination.—There was complete anesthesia to all sensations over the fifth lumbar and first sacral areas on the left side, and marked diminution of all sensations over the entire extremity. Over the lumbosacral region in the median line, there was a slight swelling. *X*-ray examination showed that there was a defect in the fifth lumbar vertebra.

Operation.—The condition was considered one of spina bifida occulta, and the opening was exposed (Dr. Elsberg) through an incision over the prominence. A process of dura was found to be attached to the soft parts, and when it was opened, several nerve-roots were found to have been adherent to the process of dura. The adhesions were freed and the dura closed. At first, the patient seemed to obtain some relief from the operation. Six months later, however, the pains in the lower limbs returned, ulcers appeared on the left foot, and both knee-jerks disappeared.

When the patient was admitted to the hospital, she complained of severe pain in the left leg over the distribution of the fifth lumbar and first sacral nerves; there was very marked diminution of all sensations over the entire left lower extremity, and diminished sensitiveness to pain and touch in the right leg. At the operation, the spines and laminæ of the twelfth dorsal and first and second lumbar vertebræ were removed. When the dura was opened the roots of the cauda equina were found to be enveloped by a fatty and fibrous growth which could not be removed. Therefore the fifth lumbar root was divided, and the dura left wide open for decompressive purposes.

Postoperative History.—The patient made an uncomplicated recovery from the operation. The pain in the left limb disappeared at once after the operation. Two weeks later, the sensation in the right leg was normal, while in the left limb there only remained a small area of hypalgesia and hypesthesia on the outer aspect of the leg above the ankle.

Case 6.—Intramedullary tumor of dorsal cord. Laminectomy and incision of cord. Marked improvement. Recurrence of symptoms. Removal of tumor masses. No improvement.

Patient.—Medical No. 622. Surgical No. 226. A. H., a woman aged 34, was admitted on the service of Dr. Bailey, Oct. 5, 1910. Previous history was negative. Present trouble began in January, 1910, with sudden pain in right abdominal region; in February she had burning and numb sensations in toes of right foot. These gradually extended up to her thigh and then into the toes and leg of the other side. Walking became increasingly difficult; by June she had to use a cane. The symptoms became gradually aggravated up to the date of her admission into the hospital.

Examination.—When she was admitted, both lower extremities were spastic; she was unable to stand alone. The knee-jerks and ankle-jerks were exaggerated, especially on the right side; bilateral Babinski, slight ankle-clonus on right side. Sensation: There was a band of hyperesthesia about 1 inch wide on a level with the twelfth dorsal spine behind. Immediately below this a band of anesthesia about 3 inches wide, below this hypalgesia, hypesthesia and complete loss of temperature sense. During the following two weeks the motor symptoms became much worse, so that the patient was unable to lift the legs more than a few inches from her bed.

First Operation.—October 19, laminectomy by Dr. Beer. The spines and laminæ of the sixth, seventh and eighth dorsal vertebræ were removed and the dura opened. The exposed part of the cord was much enlarged. Through a small injury to the cord substance, considerable fluid escaped from the cord. The cord was incised for a distance of 3 cm. and considerable blood-clot was extruded from the cord. No distinct tumor mass could be felt. Muscles and skin were sutured in usual manner. On the day following the operation, power in the right lower extremity was distinctly improved. One week later power in the lower limbs was markedly improved and there was some improvement in the sensory disturbances.

Nine days later the second stage was completed. On exposure the tumor mass readily broke away. The spine and laminæ of the ninth dorsal were removed and the dura and cord incised in an effort to remove the entire mass which apparently extended upward. Owing to the exceedingly friable nature of the substance it was impossible to remove it completely. In attempting to remove the upper pole of the mass a large amount of clear fluid suddenly escaped from the cystic cavity in the canal.

Following this operation the patient's motor power rapidly improved, and three and a half months later she could stand alone and was able to walk with light support under one axilla. There was no improvement in the sensory changes which, on the other hand, became slowly worse, particularly on the right side.

Second Operation.—About four months after first operation she began to get worse, and rapidly became bedridden. Another operation was performed. A large mass was found lying between the long spinal muscles, about 2½ inches long by one-half to two-thirds of an inch wide. It was dark green in color; very friable and could be seen to arise from the

posterior columns of the cord. As much of the mass as possible was removed.

Postoperative History.—The patient did not improve after this operation, but grew steadily worse, and within a few weeks was completely paraplegic. She finally was taken to a home where she died.

CASE 7.—Tumor of cauda equina. Laminectomy; partial removal of tumor. Improvement.

Patient.—Case No. 1401, Surgical No. 268. R. E., a man aged 41, insurance broker, U. S. Chr., was admitted to the hospital service of Dr. Bailey, May 25, 1911. Past and family history negative. For one year he had been troubled with frequent desire to micturate, and three months before admission he became entirely incontinent. For three months he had been gradually losing power to stand alone or to walk. The bowels would not move without an enema, and the rectum was incontinent if he took a cathartic.

Examination.—Head, upper extremities, chest and abdominal viscera were normal. There was flaccid paralysis of both lower limbs, the right greater than left, and marked wasting of limbs, right greater than left. There was a double foot-drop; the patient could not move the toes or ankles; could draw the legs up slightly in bed. The anus was markedly relaxed. The abdominal and epigastric reflexes were active and equal; patellar, absent on both sides; cremasteric absent; Achilles, absent on both sides. There was no Babinski; no clonus. Sensation: There was slight hypesthesia in distribution of first, second, third, fourth and fifth sacral over the posterior surface of the limbs, also in the distribution of the fifth lumbar in the right leg only; marked hypesthesia in area supplied by the third and fourth and part of fifth lumbar in the left leg, and marked hypalgesia in the distribution of the fourth and fifth lumbar and all of the sacral posterior roots on the right and slight hypalgesia over the same areas on the left side. The temperature sense was impaired in the same localities as the pain sense.

Operation.—Laminectomy by Dr. Elsberg. The twelfth dorsal, first, second, third and fourth lumbar. When dura was incised a large reddish-brown, gelatinous-looking tumor was found filling up the entire spinal canal in this region. It extended above and below beyond the limits of the opening made into the canal. The wound was closed in such a manner as to permit of the extrusion of the tumor. The patient was in a very weakened state when taken to the operating-room, and stood the operation very poorly. Owing to his general asthenic condition, it was impossible to perform the secondary operation until more than a month after the primary. The second operation was performed by Dr. Beer. At this time the tumor was found fairly well protruded from the canal, but still extending above and below the limits of the former incisions. With a curet, and by sponging, as much of the soft tumor mass was removed as was possible. Patient stood the operation fairly well.

Postoperative History.—Three weeks later he could move his legs somewhat better than before the operation. He could draw the leg upward decidedly better and could move the toes of both feet and flex and extend the ankle, which could not be done before the operation. There was no change in his bladder condition. No appreciable change in sensory disturbance.

One month later he was removed to the City Hospital, his condition being as above stated. Reports from there up to date do not show any improvement in his condition.

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Disease and Heredity.—In the case of disease, what we do inherit is not any particular disease, but a predisposition, and the inheritance exists in the germ-plasm. As every disease requires its appropriate stimulus, the germ-plasm may be represented as a gun, and the stimulus the finger pulling the trigger. Should the gun be loaded, as soon as the trigger is pulled there is an explosion, and the disease manifests itself. Should the gun not be loaded, the trigger can be pulled repeatedly, but no explosion results.—C. T. Ewart in *Proc. Roy. Soc. of London.*

POSITION AS A FACTOR IN DRAINAGE OF THE PERITONEAL CAVITY *

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For a long time surgeons have held that abscesses should be drained at their most dependent portion. The principle is so firmly established—in fact, so self-evident—that one wonders that it should ever be necessary to enunciate it. But it is, as anyone who teaches clinical surgery will vouch. When, however, one suggests that this principle should be applied in attempted drainage of the abdomen a storm of protest arises, the chief objection with which I have had to contend being that the abdominal cavity cannot be compared with abscess cavities, for here we have "the intra-abdominal pressure" favoring our attempts to drain; just as if the walls of any ordinary abscess exerted no pressure whatever!

It is granted that intra-abdominal pressure favors drainage of the abdomen, let the opening be where it will, but surely that pressure can work to better advantage if it does not have to overcome the influences of gravity.

Another objection, more recently offered, is that one cannot drain the peritoneal cavity at all, since it has been proved experimentally that drainage thereof is impossible. It is true that Yates,[1] in a series of experiments on dogs, found that his drain was completely shut off from the general peritoneal cavity in less than ten hours, and about the same time F. T. Murphy,[2] working with cats, found that rubber tissue wicks drained up to fifty-two hours. It will be seen that the results of these investigators do not quite agree, but even though both had found the cavity entirely shut off in ten hours or less, it must be remembered that they were dealing with normal peritoneal cavities and it seems reasonable to suppose that adhesions will be more quickly formed in such than in those in which fluid is present.

It is quite likely that surgeons will for some time yet continue to *try* to drain the peritoneal cavity (or intra-peritoneal abscess if you will) in certain conditions, and it is even possible that a day may come when drainage will no longer be even thought of.

For many years no attention whatever was given to the position of the patient's body in draining the abdomen and no special attention perhaps to that of the incision. Reference is made to the position of the latter by Peaslee,[3] who credits Keith (about 1855) with incision of the vagina and the use of drainage tubes. Since then drainage through the rectum[4] even has been advocated as being always available and reaching a lower point in the peritoneal cavity. It was Clark,[5] who (in 1897) was the first American surgeon to make us think of position as a factor in abdominal drainage. It was at that time the custom to drain after almost all clean abdominal operations to prevent postoperative peritonitis. Muscatello[6] had a short time previously shown that the diaphragmatic peritoneum alone absorbed lymph

* These experiments were performed in the anatomic laboratory of the Washington University Medical School and that of the St. Louis University Medical School in St. Louis, and a preliminary report of the work was made before the St. Louis Surgical Club in May, 1911.

1. Yates: Surg., Gyn. and Obst., 1905, i, 473.
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4. Maclaren: THE JOURNAL A. M. A., 1910, liv, p. 2105; Pollard: Brit. Med. Jour., July 25, 1908, p. 196.
5. Clark: Johns Hopkins Hosp. Bull., April, 1897.
6. Muscatello: Virchows Arch. f. path. Anat., 1895, cxlii, 327.

from the peritoneal cavity, and Wegner[7] had proved that the peritoneum could dispose of great quantities of infectious material, and Clark, to hasten the absorption of postoperative exudate and so avoid the necessity for drainage, advocated raising the pelvis and lowering the head. The position never became popular, quite likely because Clark himself soon after showed the disadvantage of drainage in clean cases.[8]

Bode,[9] in 1900, reported from the city hospital of Frankfort-on-the-Main successes in treating suppurative diffuse peritonitis by multiple drains with flushing and raising the head of the bed; about the same time Fowler[10] published his results with the method and advocated raising the head of the bed from 12 to 15 inches. Other surgeons, finding their results so much better by use of this method, have gone on raising the patient, till now one sees and hears a great deal about the advantages of "the half-sitting posture" as a routine matter after placing drains. This half-sitting posture or even the sitting posture soon becomes an uncomfortable one to a sick patient and is not without its disadvantages in weak heart and low pressure and even when it is used and drains placed in the pelvis in the usual way the lowest point of the cavity is not drained.

Harbin,[11] in 1905, recommended the ventral decubitus, but its use has not become general; possibly because of the discomfort to the patient.

Since 1900 I have frequently demonstrated to students in anatomy the fact that with the body supine the lowest point in the pelvic cavity is from 4 to 6 inches lower than the upper margin of the symphysis pubis, while with the body vertical (standing or sitting) the lowest point in the pelvic cavity (peritoneal) is from 1½ to 2½ inches below the upper margin of the symphysis pubis; that the lowest points in the abdominal cavity with the body supine and horizontal are in the neighborhood of the mid-points of the external arcuate ligaments and that with the body supine on the table a greater thickness of wall separates the pelvic cavity from the table than separates the abdominal cavity from the table in the neighborhood of the ligamenta arcuata externa.

Coffey[12] showed that, in order to have fluid flow into the pelvis from the hollow on either side of the spine without turning the body on the side, it was necessary to raise the thorax and upper abdomen so that the long axis of the abdominal cavity was at an angle of 60 to 70 degrees with the horizon.

For the past three years I have used the lateral position with the upper part of the body raised to about 30 degrees with a pillow under the body above the iliac crest and drained below and internal to the anterior superior iliac spine in all suppurative conditions in the lower abdomen in which I thought drainage indicated, always turning the patient on the side most involved. I find it more satisfactory.

G. R. Fowler[13] states that Dawbarn poured milk into the peritoneal cavity of a cadaver and was unable even to wash it all out, though he repeatedly flushed the cavity with water. It has been stated[1] that Helvetius, Mikulicz and Delbet poured water into the cavity and never could get it all back. Sänger[14] does say that "Helvetius allowed 500 gm. to flow in, then tubes were inserted and some knocks were given with the hand, on which Helvetius was surprised that no fluid came out." Mikulicz and Delbet are also said[1] to have performed the experiment with similar results, but I have been unable to find their original papers.

7. Wegner: Quoted by Clark: See Note 5.
8. Clark: Am. Jour. Obst., May, 1897, xxxv, 481.
9. Bode: Centralbl. f. Chir., 1900, xxvii, p. 33.
10. Fowler, G. R.: Med. Rec., 1900, lvii, 617.
11. Harbin: Med. Rec., 1905, lxvii, 776.
12. Coffey: THE JOURNAL A. M. A., March 16, 1907, p. 937.
13. Fowler, G. R.: Pract. Therap., Hare, 1897, p. 599.
14. Sänger: Am. Jour. Obst., 1880, xxiii, 1009.

EXPERIMENTS

Experiment 1.—As the body lay supine and horizontal 1,000 c.c. of water were poured into each loin of a cadaver from which the viscera had been removed. The fluid was deepest in the region of the eleventh and twelfth ribs. The body was now gradually raised toward the sitting posture. By the time the body was raised to an angle of 40 degrees the pelvic cavity was full and there was still fluid in both loins. The water now began to escape from the pelvis over the symphysis. The body was slowly raised to within 10 to 15 degrees from the vertical—or practically bolt upright. When the water ceased flowing over the symphysis it was found that the pelvic cavity still contained over 500 c.c. of fluid.

Experiment 2.—With the body supine 1,000 c.c. of water were poured into the pelvic cavity. The body was now turned toward the right side. The water flowed from the pelvis over the psoas into the iliac fossa and upward into the flank. If the body were turned just more than half way between pronation and supination all of the water escaped from the pelvis.

Experiment 3.—Experiment 2 was repeated, turning the body toward the left side with similar results.

Experiment 4.—With the body in the right lateral position and the water in the flank as in the last two preceding experiments, the thorax and upper part of abdomen were gradually raised till the long axis of the abdominal cavity was at an angle of 40 to 45 degrees with the horizon. The water gravitated, first filling the space between the right iliacus muscle and the anterior abdominal wall and then flowing over the right psoas into the pelvic cavity.

Experiment 5.—Experiment 4 was repeated with the body in the left lateral position with similar results.

Experiment 6.—Half-inch non-collapsible split rubber tubes were inserted into the cavity at points just below and internal to the anterior superior spines of the ilia, and Experiments 4 and 5 were repeated. All of the water escaped before the body was raised beyond 40 or 45 degrees, the results on the two sides being similar.

Experiment 7.—A male body in which the viscera were still *in situ* was now selected and a small incision made in the median line about 2 inches above the umbilicus, another incision about 2 inches in length was made in the median line just above the symphysis. With the body supine 500 c.c. of water were introduced (by catheter and syringe) into each loin. Some of the water found its way to the pelvic cavity in the undisturbed condition of the body. The thorax and upper abdomen were now elevated and the water soon began to escape through the lower incision. It continued to do so until the body had been raised to within 15 to 20 degrees of the vertical and then none flowed, though the body was raised bolt upright. The collected water did not quite total 500 c.c. and the waste was slight. The pelvic cavity still contained fluid and 34 c.c. were recovered from it by syringe.

Experiment 8.—Water (1,000 c.c.) was introduced as before and half-inch non-collapsible split rubber drainage tubes inserted just below and internal to the anterior superior iliac spines. The body was turned on its right side. While it was being turned some of the water escaped from the lower median incision, and almost as soon as the movement was completed water ran from the tube in the right side. The thorax and upper abdomen were slowly elevated. The water continued to run until the long axis of the abdominal cavity formed an angle of 40 to 45 degrees. About 750 c.c. were collected, probable waste 100 c.c. Not more than 10 or 15 c.c. were collected with syringe and catheter on suction in loins and in pelvis.

Experiment 9.—Experiment 8 was repeated, turning the body on the left side. None was lost through the median incision this time. As before water began to flow from the

tube before the body was raised and it continued to do so as the body was raised as before, ceasing by the time the body was raised to 45 degrees. About 600 c.c. were collected, probable waste 40 c.c. With syringe and catheter nearly 250 c.c. were recovered from the right loin ten minutes after the body had been replaced in its original position.

Experiment 10.—In the abdomen of a male body a small incision was made in the median line just above the umbilicus and with syringe and catheter 500 c.c. of water were introduced into each loin. A loop of small bowel was withdrawn and a catheter fastened into its wall. Air was now pumped into the intestine till the abdomen was moderately distended. An incision 1 inch long was made in the median line above the symphysis and the body slowly raised. Water began to escape from the lower incision before the body had been raised more than 20 degrees and continued to do so till from 60 to 70 degrees was reached. About 500 c.c. were recovered, waste 30 or 40 c.c. About 150 c.c. were recovered from the pelvic cavity with syringe and catheter and less than 10 c.c. recovered from the right loin, none from left.

Experiment 11.—500 c.c. of water were introduced as before and the body turned on its right side, just more than mid-way between pronation and supination. An incision 1 inch long was made just below and internal to the right anterior superior iliac spine. Some water escaped at once. The usual tube was inserted. More water flowed. The body was now slowly raised as before, water continued to flow from the tube until the body was elevated to from 40 to 45 degrees. Barely 735 c.c. were recovered, waste 30 or 40 c.c., and it was impossible to recover any with the syringe.

Experiment 12.—Experiment 11 was repeated, turning the body on the left side. The amount of water recovered from the tube inserted just below and internal to the left anterior superior iliac spine was only slightly more than 500 c.c. and more could not be made to flow out, no matter how high the body was raised. On lessening the distention, about 120 c.c. were recovered from the right loin.

CONCLUSIONS

The experiments showed:

1. The pelvic cavity could not be completely drained of water by raising the supine body even to 90 degrees "bolt upright."

2. The pelvic cavity could be completely emptied of water by turning the horizontally placed body just more than mid-way between pronation and supination.

3. Water found its way from the left loin to exit just below and internal to the right anterior superior iliac spine with body raised to 45 degrees in the right lateral position.

4. With a distended condition of the intestines, although water gravitated less readily, practically the same results were obtained.

5. Although water found its way from the left loin, as above stated, it did not so easily find its way from the right loin to exit just below and internal to the left anterior superior iliac spine; no matter how high the left laterally lying body was raised a quantity remained in the right loin.

I wish to express my thanks to Professor Terry in the Washington University Medical School and to Professors Eycleshymer and Shoemaker in the St. Louis University Medical School for their great kindness and courtesy, and to Dr. H. McClure Young for valuable assistance.

Metropolitan Building.

Health Insurance.—I am in favor of compulsory low-wage insurance, and believe that it will come sooner or later in some form and that it is our duty to keep awake that we be not the loser but be benefited by the arrangement. All of which means complete organization.—J. N. Davis in *Journal of Kansas Medical Society.*

CLINICAL ASPECTS OF SYPHILIS OF THE LIVER *

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An error in diagnosis gave me the incentive for reviewing this subject. I had occasion to observe a patient for a period of one and a half years. He had what I considered to be fairly typical symptoms of gall-stones, whereas the operation showed that the clinical picture was due to multiple gummata of the liver. The general literature of this topic gave me the impression that the keenest clinicians frequently failed to suspect the syphilitic process in the liver since it mimics, as Arthur R. Edwards[1] puts it, a great many diseases of the liver and gall-bladder.

HISTORY

Syphilitic jaundice was known as far back as Paracelsus, Matthiolus and François de la Boë Sylvius. French writers, among them Lancereaux,[2] Cornil and Mauriac, have emphasized the relationship between icterus and syphilis. Werlhof (1732), J. Frank (1821), and Yvarres (1854) had a knowledge of fever in lues. Guntz first recorded syphilitic fever by a thermometer. Frerich[3] in 1861, Bäumler[4] in 1872, and Hirschberg and Raichline[5] in 1894 called attention to the fever accompanying syphilis. Bäumler[4] reported seven cases of syphilis, mostly joint cases, all having a hectic type of fever. The names of Lancereaux in France and Virchow in Germany are closely connected with the study of syphilis of the liver, both as an anatomic and as a clinical entity.

During a period of eighteen years thirty cases were diagnosed during the patients' lives at the Johns Hopkins Hospital.[6] Among 2,500 necropsies in the same period there were forty cases of gummata or scars and fifteen syphilitic cirrhoses. An analysis of 5,088 post-mortems by Flexner at the Philadelphia Hospital showed forty-two cases with interstitial changes, twenty-two gummata, sixteen cases of perihepatitis, seventy of amyloid degeneration, and thirty-eight of specific scars. The post-mortem records of St. George's Hospital, London, for a period of forty-two years, showed that among 11,629 post-mortems, there were thirty-seven cases of gummata and twenty-seven of syphilitic scars.

PATHOLOGY

The *Spirochæta pallida* is, of course, the primary etiologic factor of the disease. Additional factors put the liver in a state of *locus minoris resistentiæ*, thus favoring a pathologic process in that organ. Gastro-intestinal disorders, especially those in which ptomains are in excess in the intestinal tract, throw more work on the liver, which, as we know, has among other functions, that of destroying ptomains. This is the view entertained by Hirschberg and Raichline. Alcoholism, trauma, malaria, preexisting jaundice, which lessen the resistance of the liver, are predisposing factors. In a case of Pitt, the syphilitic process developed on the site of an old hydatid cyst.

* Read before the Chicago Medical Society, Oct. 28, 1911.

1. Edwards, A. R.: Am. Jour. Med. Sc., 1910, cxl, 527.
2. Lancereaux: Syphilis hépatique, Union Méd., 1889, No. 46.
3. Frerich, Th.: Klinik der Leberkrankheiten, 1861.
4. Bäumler: Deutsch. Arch. f. klin. Med., 1872, ix, 397.
5. Hirschberg and Raichline: Bull. gén. de thérap., June 30, 1895.
6. Quoted from "A System of Syphilis," D'Arcy Power and J. Keough Murphy, iii.

It is the belief of many that syphilis of the liver is seldom associated with parasyphilitic diseases of the nervous system. A. R. Edwards, however, alludes to two cases in which the persistence of pain, after the subsidence of gummata under specific treatment, was in all probability due to the associated mild tabes.

The majority of the histories I have read show that the clinical manifestations appeared about ten to fifteen years after the initial infection. In very exceptional cases, gummata were found in the livers of fetuses or still-born children.

Pathologic changes in the liver occur either congenitally or during the secondary and tertiary stages of acquired syphilis. Congenital syphilis may assume the type of interstitial hepatitis or the gummatous type. The acquired variety may also be interstitial or gummatous. In the first form, the organ is frequently divided by strands of connective tissue into several lobes, forming what is known as hepar lobatum. A case of syphilis of the liver that came to post-mortem contained sixteen lobes. The organ may be covered by adhesions, mostly diaphragmatic, leading to what is usually described as perihepatitis fibrosa adhesiva. Gummata may be single or multiple, and are situated usually in the periphery of the organ, the region of the suspensory ligament, the edge of the liver and the region of the gall-bladder and the common duct. They are less frequently situated in the depth of the organ. J. L. Allen collected eighty-six cases of gummata of which eleven were single.

A gumma may attain a very large size. A specimen in St. George's Hospital museum (Series IX, 183g) shows a voluminous gumma of the right lobe of the liver, perforating the diaphragm and involving the lower lobe of the right lung.

This brief description of the pathology assists us in the explanation of several of the clinical manifestations. The perihepatitis accounts for the pain, but I found no plausible explanation in the literature for its periodicity, although the perihepatitis is persistent. The presence of gummata in the depth of the organ, on the posterior surface, or any other part which is not readily accessible to the eye or the exploring finger of the surgeon, may escape his notice, thus accounting for those curious cases in which the symptoms continue in spite of the apparently negative anatomic findings.

Gummata situated in the region of the common duct explain the mechanical type of syphilitic jaundice.

The symptoms of syphilis of the liver are both subjective and objective. Pain, fever and, less commonly, jaundice, are the foremost symptoms. The pain may be continuous for a period of days, weeks or months, or it may be periodic. It may be mild, or intensely colicky in character. One day I found my patient rolling on the floor in an attack, and morphin did not lessen its intensity. It is usually local, occasionally referred to the back, exceptionally to the shoulder. Primary nocturnal pain or nocturnal exacerbations of diurnal pain are suggestive of a syphilitic process. Pell considers the localization of pain in the left lobe as pathognomonic.

Fever may occur during secondary or tertiary syphilis in all its forms. It may be continuous or intermittent. It may resemble the typhoid curve, the hectic fever of pulmonary tuberculosis or pyemia and occasionally that of malaria. It is frequently preceded by chills and often associated with sweats. It is rather irregular in its periodicity and atypical in its aspect. There is one case on record which had an irregular fever for eight years. According to Klemperer and a majority of writers, the fever is due to the absorption of toxic elements resulting from broken-down gummata. Bristowe,[7] Rolleston,[8] Lilienthal[9] and others believe that the fever is due to secondary infection of gummata. The sterile blood-cultures in a number of cases speak against this view (Klemperer).

Jaundice is of less frequent occurrence. It may manifest itself in the early secondary stage, or be one of the symptoms of tertiary syphilis. It usually appears five to six weeks after the initial lesion and frequently in conjunction with the cutaneous manifestations. Lancereaux collected twenty-one cases of icterus associated with the secondary stage of syphilis. This relationship was first emphasized by Gübler in 1853. The percentage of jaundice in syphilis is higher in the French records than in the German. In S. Werner's collection of 15,799 cases of syphilis, jaundice was present in only fifty-seven cases or 0.37 per cent., which is a much lower figure than the percentage given in French statistics.

As a whole, jaundice is less frequent than the other symptoms and is of a mild character and short duration. Its cause has been variously interpreted. Gübler considers it as due to an exanthem of the intestines and the mucosa of the bile-tracts, a sort of specific cholangitis; Lancereaux and Cornil as due to pressure from enlarged lymph-nodes on the portal vessels. In a series of fifty-seven cases of syphilitic jaundice there was enlargement of the superficial lymph-nodes in forty-one. Virchow ascribes it to pressure of gummata on the bile-tracts, while Bierner and Frerich attribute it to perihepatitis.

A great many cases of lues of the liver have a long latent period, characterized only by occasional gastro-intestinal symptoms of a vague nature. Marcuse believes that two-thirds of patients with gummata of the liver have early digestive disturbances. In another group of cases pain, fever and jaundice may subside for a time during which the patients may have only atypical gastro-intestinal symptoms, thus adding to the confusion of the clinician.

The spleen is often enlarged. The urine contains, in some cases, albumin. The leukocyte count is either normal or deviates within small fractions above or below the normal. A number of patients had leukopenia, which in conjunction with a continuous fever and large spleen suggested typhoid. Neusser found a slight increase in eosinophils in several cases.

The physical findings do not seem to be pathognomonic, judging from the number of errors committed. It is usually asserted that the liver is most frequently enlarged. It may, however, be normal or even smaller than normal. The organ may be irregular in shape and distinctly lobulated. The left lobe is sometimes atrophied or separated by bands of connective tissue from the right lobe. Occasionally a fair-sized gumma can be palpated. Adhesions may so fix the liver as to restrict the respiratory excursion of the organ.

DISEASES FOR WHICH HEPATIC SYPHILIS MAY BE MISTAKEN

The diagnosis of syphilis of the liver is difficult and at times impossible, as it simulates closely almost every hepatic disease, gall-stones and carcinoma in particular. At times the clinical course resembles that of several febrile diseases. While bedside experience teaches us that classical or text-book cases are not common, still we have to admit that we must have a number of suggestive

7. Bristowe: Brit. Med. Jour., 1886, i, 878.
8. Rolleston, H. D.: Diseases of the Liver, 1905, Phila., p. 348.
9. Lilienthal: Ann. Surg., 1902, xxxvi, 132.

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symptoms, grouped in a definite manner, in order to make an ordinary diagnosis. With syphilis of the liver we are more or less helpless in the interpretation of clinical manifestations, and logic and experience count for little in its diagnosis. Whenever a patient exhibits a symptom-complex suggesting a disease of the liver, in which the clinical history is atypical, the order and the character of the symptoms unusual, one ought to think, among other possibilities, of syphilis of the liver. A definite history of syphilis, a positive Wassermann reaction and a rapid improvement under the influence of specific treatment are the only means of making a definite diagnosis. The affection may simulate the following diseases:

1. Cholecystitis, with or without Stones.—The greatest number of diagnostic errors is reported by Riedel,[10] who speaks of several patients operated on for what was thought to be gall-stones, but proved to be gummata of the liver. Joseph L. Miller[11] reports six cases of syphilis of the liver in which the diaghosis of cholecystitis was made once, and that of stones twice. Frank Billings[12] relates a typical history of gall-stones. The patient was operated on by Christian Fenger, and the case proved to be one of gumma. The latter surgeon had another similar experience shortly after. He believed that whenever gummata are situated in the region of the gall-bladder, the differential diagnosis cannot be made. A case of Howard Lilienthal imitated suppurative cholecystitis, although lues was thought of. Exploration revealed a suppurating gumma. Of ten cases of biliary colic reported by Riedel there was icterus in seven. One patient had attacks for fifteen years. The difficulty becomes still greater when the patient really suffers from cholecystitis with or without stones in addition to gummata. This association was present in the collection of Charles H. and W. J. Mayo[13] in four cases, two only having stones. While the histories of the cases reported are suggestive or even classical for cholecystitis, a closer discrimination usually reveals that the pain is not always colicky in character; that it may extend over long periods with irregular remissions; that it is more or less limited to the right hypochondrium, and that it does not radiate toward the shoulder. The fever is capricious in its type and the jaundice, if present, is very mild and of short duration.

2. Carcinoma.—Virchow[14] states that he has seen the best clinicians mistake gummata of the liver for carcinoma. Joseph L. Miller speaks of a case diagnosed clinically as carcinoma which was apparently confirmed by exploration, yet in which specific treatment resulted in cure. Syphilis of the liver may exhibit some of the typical symptoms of carcinoma — pain, tumor of the liver, cachexia, ascites, gastro-intestinal symptoms, even blood in the vomitus and feces and absence of free hydrochloric acid from the gastric juice. Fournier holds the view that ascites is rather uncommon in syphilis. A patient of William E. Morgan, as mentioned by Arthur R. Edwards, was extremely emaciated and had enormous ascites in connection with gummata. Prior to the operation a diagnosis of carcinoma was made. Splenic enlargement and albuminuria are absent in carcinoma. The hepatic tumor, if palpable, is never so large in syphilis as it is in carcinoma. Syphilis extends over a longer period of time and usually attacks younger people.

10. Riedel: Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1904, xiv, 1.
11. Miller, J. L.: Illinois Med. Jour., 1905, viii, 240.
12. Billings: Philadelphia Med. Jour., 1900, vi, 671.
13. Quoted from Keen's Surgery, iii, 980.
14. Virchow: Die Krankheiten Geschwülste, ii, 428.

3. Liver Abscess.—Two brief histories will illustrate the point. In the first one, a case reported by G. Klemperer,[15] the patient had for several months pain in the region of the liver, chills, followed by an irregular temperature, enlarged liver and icterus. He was to be operated on for liver abscess. At the suggestion of Renvers the patient received intramuscular injections of corrosive sublimate. The whole clinical picture cleared up after fourteen injections. The second case is reported by Lesage. The patient had marked epigastric tenderness, chills and fever extending over a period of nine months, 21,000 leukocytes, and lost 40 pounds. At first a diagnosis of liver abscess was made. After one week of mixed treatment, however, all the symptoms disappeared and never recurred. One is more apt to confuse syphilis with liver abscess in tropical countries.

4. Septic Pylephlebitis.—The patient of Dr. Arthur R. Edwards had all the earmarks of septic pylephlebitis of the portal vein. The diagnosis was based on the sudden tenderness over the portal region, large ascites, irregular temperature, preceded by chills and fever. Subsequently a cure was effected by mixed treatment.

5. Pulmonary Tuberculosis.—Cases in which there is loss of weight, night sweats, afternoon temperature and cough may resemble pulmonary tuberculosis. Such cases were reported by E. G. Janeway,[16] Joseph L. Miller, Bäumler, and others.

6. Typhoid Fever.—A continuous fever with vesperal exacerbation, leukopenia, and splenic enlargement may suggest typhoid. Hirschberg and Raichline report the case of a patient who, after twenty years from the initial lesion, developed a febrile disease with evening exacerbation, some gastro-intestinal symptoms, diarrhea in particular. A diagnosis of typhoid was made. Later, antisyphilitic treatment administered to this patient was followed by a prompt cure. Similar cases were reported by Bäumler and others.

7. Malaria.—This was diagnosed in a number of cases by very competent clinicians on account of the intermittent type of temperature preceded by chills and accompanied by splenic enlargement.

8. Echinococcus Cyst.—This diagnosis was made in several cases.

9. Splenic Anemia.—This condition may be suggested by splenic enlargement, in the presence of a normal-sized liver, leukopenia and anemia of the secondary type. A splenectomy was performed in a case of Coupland for what was supposed to be splenic anemia. The patient improved shortly after the operation but subsequently died from hematemesis and ascites. A post-mortem examination disclosed syphilis of the liver. Several similar cases have been reported by Osler.

10. Atrophic or Hypertrophic Cirrhoses.—The differentiation from these conditions is often impossible. Syphilis of the liver differs somewhat from the atrophic type in that the liver is usually large, irregular, and ascites is not so common. The general nutrition is not necessarily impaired. Hematemesis and melena are usually absent. It differs from the hypertrophic type in that the liver is large but irregular instead of smooth. The jaundice if present is very mild. It never amounts to an icterus gravis.

11. Movable Kidney.—A lobulation of the liver may resemble the kidney.

In order to appreciate how easy it is to mistake all the conditions enumerated for syphilis of the liver one must

15. Klemperer, G.: Therap. d. Gegenw., 1903, v, 41.
16. Janeway, E. G.: Am. Jour. Med. Sc., September, 1898, p. 251.

read in detail the individual histories. It is also striking that practically all the cases reported in the literature emanate from the pen of clinicians of repute. One is almost tempted to say that whenever we do not know definitely what is the matter with the patient presenting vague or atypical symptoms referable to the liver, it would be advisable to put the patient on a rigid antisyphilitic treatment for two or three weeks. Rosenbach[17] is not in sympathy with this method of diagnosis simply based on the therapeutic test.

COMPLICATIONS

Gummata may disintegrate and subsequently suppurate. They may break into the general peritoneal cavity or into neighboring structures or organs. Two cases of peritonitis from this cause were reported by S. Wilks[18] in 1877, and by Griffith[19] in 1888. Newbolt reports a case of empyema of the right chest resulting from rupture of a suppurating gumma situated on the posterior surface of the right lobe. Gummata may calcify and, if numerous, may calcify the entire liver.

TREATMENT

Mixed antisyphilitic treatment has a remarkable influence on syphilis of the liver. It is almost impossible to believe the reports of some cases. Patients suffering from the most intense symptoms for years are reported permanently cured within a week or two, under specific treatment. As far as I know, salvarsan was never used for the cure of gummata of the liver. In my case I deemed it wiser to put the patient on the usual mixed treatment and not to inject salvarsan until some later date. I reasoned that if salvarsan were effective in destroying so many spirochetes, enough antitoxin would be liberated to hazard the patient's life. The case reported by Floyd Burke Riley[20] had a slight fall in the temperature, which was continuous for two months, under the influence of atoxyl. Occasionally, a gumma was removed for diagnostic purposes. In some cases a suppurating gumma was curetted and the cavity packed with iodoform gauze. Keen reported in 1899 twelve cases of resection of the liver for gumma. Cumston[21] in 1903 added fifteen cases to that list.

CASE REPORT

History.—H. C., aged 35, about 18 months prior to this report experienced epigastric distress shortly after meals, which continued almost daily up to the time of examination. At times he had a sense of fulness and distress an hour after eating, frequently associated with nausea, but not with vomiting. This feeling lasted from one to two hours. Occasionally, he was awakened after midnight with sharp epigastric pains. These symptoms were often mild in character; at times, however, they were quite distressing. In addition, the patient had had in the previous year and a half sudden severe attacks of pain in the right hypochondrium, radiating toward the back, sometimes to the tip of the right scapula. These attacks would last from three to seven days. I saw the patient during several attacks and, on one occasion, as mentioned, I found him rolling on the floor with pain. The attacks were severe enough to require morphin. Every attack was usually associated with a chill followed by a rise of temperature. The patient was never jaundiced. He always had a certain degree of tenderness under the right costal arch even when free from attacks. His appetite was poor most of the time and he was frequently nauseated about a half hour after eating, but never vomited. He was chronically constipated. He had no genito-urinary symptoms. He was of nervous temperament. During his illness he lost 20 pounds. He had never been ill before except fourteen years previously when he contracted syphilis while a soldier in the army. The lesion was typical and was followed by equally typical secondary symptoms. He was treated for four months by deep intramuscular injections of mercury. One year later he was again treated for a period of six months by inunctions with mercurial ointment. He had married about three years prior to examination. His wife had no miscarriages; one pregnancy was carried to full term. The child was 13 months old and had no stigmata of syphilis.

Examination.—The patient was admitted to the Presbyterian Hospital, Sept. 4, 1911. Two days previously he had had a severe attack as above described. His temperature, the day of admission, was 101.4 F., dropped to 99.4 the second morning and rose to 101 in the evening. His leukocyte count was 10,300; hemoglobin, 75 per cent. The urine was normal. Physical examination revealed generalized adenopathy, the individual lymph-nodes being painless and movable. The integument was distinctly anemic. The bulbar conjunctivæ were subicteric. He had a marked alopecia. Otherwise the physical examination was entirely negative. Prior to the operation I made a diagnosis of cholecystitis, possibly with stones.

Diagnosis.—The epigastric distress coming on after meals and covering a period of eighteen months compelled me to think also of the possibility of a gastric or duodenal ulcer. On Sept. 7, 1911, I made an incision through the rectus muscle with the purpose of exploring the pylorus and duodenum and also the gall-bladder. I found the stomach and the duodenum normal. The gall-bladder was normal in size and appearance and emptied readily on pressure. The convex surface of the right lobe of the liver and its border were studded with numerous, small, whitish-gray nodules. There were similar tumors along the common duct and also at the neck of the gall-bladder. From the gross appearance I could not identify the nodules. I excised two small nodules for diagnostic purposes. The histologic sections showed the typical picture of gumma.

Treatment.—On the second day after the operation I instituted the mixed treatment and have continued it to the present. There was a sudden drop in temperature from this day on and it remained normal afterward. The patient made an uneventful recovery, the wound healing by primary intention.

At the end of the week the patient was entirely free from symptoms. He remained well and at the end of two weeks had gained 14 pounds.

CONCLUSIONS

1. The clinical statistics underestimate the frequency of syphilis of the liver. The Wassermann reaction will increase the number of cases.

2. The symptom-complex of syphilis of the liver is not pathognomonic, as it simulates almost every hepatic disease; occasionally it simulates febrile diseases.

3. Whenever the diagnosis is uncertain, resort should be had to the therapeutic test as well as to the Wassermann reaction.

4. Mixed treatment has a striking effect on lues of the liver frequently, regardless of the time it has existed.

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Conscription for Japanese Military Service.—According to statistics recently published in Japan, 7,941 of 436,343 conscripts examined last year had trachoma and 11,593 venereal disease. The average of educational acquirements is constantly rising, but still there were 4.3 per cent. who were unable to read and write. There were 551,924 young men of the conscript age, but 83,602 were excused on account of attendance at school or college; 35,538 are residing elsewhere than in Japan, and 26,678 could not be located or were in jail and 696 were convicts, while 8,383 were excused on account of sickness. About 70.3 per cent. averaged well physically.—*Journal Royal Army Medical Corps*, 1911, xvii, 112.

MUSCULAR DEVELOPMENT, THE CAUSES FOR THE LACK OF IT AND THE VALUE OF PHYSICAL EXERCISE

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In this age of mental development, when the achievement of success can come only through the exercise of the mental capacities, we are apt to forget the maxim *"mens sana in corpore sano"* and allow the balance between mind and body to be broken. To be sure, the material return in occupations requiring the use of the muscles alone cannot ever equal the return from occupations requiring the exercise of the mind — if we are to measure success by return — nevertheless, the sphere of one's usefulness with a poorly developed body is necessarily limited and short-lived. Civilization unquestionably tends toward an overdevelopment of the mind at the expense of the body. Recently, and in recognition of the marked muscular deterioration of the civilized races, the necessity for improving their development has received much attention.

The term "physical development" applies mainly to muscular development. A short muscular individual could hardly be spoken of as a poor physical specimen, nor could a tall one with a poor musculature be spoken of as having a good physique. The muscle is the standard, since lack of such development brings with itself a train of physical defects. Besides, the human body "exhibits only two forms of vital action necessary to its existence — first, that of the various secreting and excreting organs in pursuing their functions; and second, the entire muscular apparatus, whether of ordinary muscles, arterial coats or otherwise." The importance of the muscular system is, therefore, apparent.

Considering briefly the main points in connection with the muscular system, we find that the muscle — essentially a connective tissue — is developed from the mesoblast of the primitive germ layer by an elongation of the embryonal cells and by a multiplication of their nuclei. The unit of muscular tissue is the muscle fiber. It is estimated that the longest fiber does not exceed 1½ inches and that the width varies from $^1/_{400}$ to $^1/_{800}$ of an inch. Those muscles whose function it is to give a wide range of motion have long but few fibers, while those requiring strength mainly have short but numerous fibers. The absolute force of a muscle is proportionate to the number of fibers, that is, to its "cross-section." There are about 501 muscles in the human body, of which about 405 are voluntary or skeletal, and the rest involuntary or vital. The index of muscle-efficiency is its power of contraction; that is, the power of doing mechanical work without fatigue. Not all the muscle-energy, however, is expended in doing mechanical work — about five times as much is required in the production of body heat.

The muscles might be called the "internal respiratory" organs in which the ultimate exchange of oxygen and carbon dioxid takes place. The blood gives up the oxygen and receives and carries off the carbon dioxid. To accomplish this, the muscles are supplied with an exceedingly fine network of capillaries. Increased muscular activity means increased respiratory efforts, since there is greater oxidation and, therefore, a greater loss of carbon dioxid and a consequently greater demand for oxygen. It is this increased respiratory exchange in muscular activity which increases the nutrition and general health of the body. The greater the muscle power — and that is in proportion to the number of fibers *and especially to their width* — the greater the endurance of the organism.

As a general rule, muscular development is "better in cold or temperate climates than in warm climates; there is less bodily exercise but this is offset by taking less food, augmented skin action and, therefore, increased circulation. In colder climates there is, of course, greater force required to disintegrate the animal tissues to generate heat and the like." Furthermore, the muscular development of people living in the interior is better than that of those living on the coast, and in the mountains better than in the interior. People in the interior are usually farmers whose occupation necessitates outdoor life and the use of the muscles; the reason for the hardiness of the people in the mountains is, of course, apparent.

"Lack of muscular development betrays no specific pathologic condition; there is a simple atrophy of the fibers, which diminish in width, and there is an increase of connective tissue between the fibers." Very frequently there is an increase in fatty tissue, which gives greater girth to the muscle while the fibers are atrophied — a condition which is analogous to the condition in pseudohypertrophic muscular paralysis. The internal perimysium, in these cases, increases at first, is then transformed into fatty tissue while the muscle tissue itself may be well preserved, but later the muscle fibers are forced apart and atrophy. This is the condition found in "fat rickets" and obesity.

Individuals with this simple atrophy present a flabbiness and lack of muscular tone which is especially noticeable in the facial muscles and which gives the face a peculiar expression — or lack of expression — which really amounts, in marked cases, to a facial myopathy; the face looks flabby and the skin droops markedly toward the angle of the jaw. This peculiarity of facial expression betrays the existence of atrophy or weakness of the muscles elsewhere, namely over the abdominal wall — accompanied by hernia — and by noting this sign a great many cases of hernia can be detected.

The great influx of Europeans into this country particularly interests us in the physical condition of these people, both because their well-being depends largely on their physical ability to stand the hardships consequent on settlement in a new country, and especially because that settlement here, in large numbers, might influence the physical character of the people already here. The following remarks about our immigrants are based on five years experience as medical inspector at Ellis Island, the main port of immigration on the Atlantic Coast. Beginning with the races occupying the Mediterranean coast, the first to arrest our attention are the Greeks. They differ from their ancient forerunners not only in language but also in physique. If regarded from the standpoint of physical development they are the exact antitheses of their ancient progenitors, being short, small-headed and thin-muscled. A large percentage of them are undersized and do not present the physical development of their age. This is especially noticeable in boys between the ages of 16 and 20, who do not present the development, physical or sexual, of boys of 12; many of the Greeks have arrested sexual development or total absence of it — eunuchoidism. Individuals with arrested sexual development have a peculiar facial character due to the absence of any beard and to

the presence of wrinkles especially noticeable over the angle of the mouth. Once this facial characteristic is noted the condition cannot be overlooked or mistaken.

The modern Greeks are not, in reality, the direct descendants of the ancients; numerous wars, invasions and migrations have changed their ethnology entirely. The Macedonians, a people living north of Thessaly in Greece, are less well-developed — probably for the same reasons — than the Greeks.

Another nationality from which the United States draws a large part of its immigrants is that of the Italians, but here it should be remembered that the northern and southern Italians are two different races and present different physical characteristics. The northern Italians have the characteristics of — and belong to — the Slavic and Germanic races; the southern Italians are a mixture of Italian, Greek and African. They are small, dark and of a poor musculature. The percentage of undersized individuals and of those having arrested sexual development is much smaller than among the Greeks.

The Turks are a well-developed people — quite a contrast to their neighbors, the Greeks.

The Armenians, while not really Europeans, live chiefly in European Turkey; they are a very poorly developed people.

Of the people inhabiting the Iberian Peninsula — the Spanish, the Basques and the Portuguese — the Basques are the best while the Portuguese are the poorest.

What are the factors operating in the physical deterioration of the Mediterranean peoples? Why should not the present peoples be as strong as those of old? Undoubtedly the frequent intermixture or crossing with inferior blood from the African and Asiatic coasts is largely responsible for it. Are not the present peoples the "recessives" of the Mendelian school of evolution? According to this doctrine, there are no transitional types on a crossing between a superior "dominant" and an inferior or "recessive" types, but the result is three "dominants" to one "recessive." Where, then, are the "dominants"? No doubt, in harmony with this doctrine it is possible to conceive of the disappearance of the "dominants" from the fact that the Mediterranean countries have always been the "cock-pit" of Europe, where nearly all the battles were fought and which has required the sacrifice of the best — physically — of the people, leaving only the "recessives." Might not their physical inferiority be explained on the principle that their frequent intermixture with widely different races is analogous to the result, in animals, of the crossing between different varieties of the same species—"mongrelism"? Another factor in their condition is the endemicity of various diseases in that region, especially malaria. Besides, they are a poverty-stricken people, greatly underfed; among the Greeks the poor live almost entirely on olives.

Likewise, with the southern Italians, while the frequent crossing with inferior races and the many exhausting wars may have helped to keep the standard of physical development lower than among the northern peoples, their mode of living, their great poverty and the endemicity of a number of diseases are undoubtedly responsible factors. The Italians are a poverty-stricken people, underfed and underworked; they feed mainly on carbohydrates, rarely consuming any fresh meats. Even discounting the fact that they live in warm climates, they consume too little. It is true that, in spite of their physical inferiority, they are a long-lived people, but only so long as they remain on their own soil, or, if away from it, under similar conditions. If transplanted to another soil under adverse conditions they fare badly. The Italians age so prematurely that their longevity is of little use to them from an economic standpoint, since a prematurely aged people merely vegetates.

In this country a large number of the Italians have taken to tunnel-digging and railroad construction work. Some have gone into the petty tradings, with which we are all familiar. Of those engaging in the heavier occupations, it is not surprising to note what a large number develop tuberculosis, simply because they are not physically constituted for such work. It is, of course, a question whether any people, no matter how good their physique, can long continue in such occupations with impunity. On the other hand, these Italians, as well as other people who change from a poorer to a better environment, have shown marked improvement in physique after settlement here. In fact, the succeeding generations have a tendency to take on all the characteristics of their neighbors. Boas, in a lecture on anthropology, commented on the fact that European immigrants, after their arrival here, changed physically to conform to the types in this country.

Before considering the physical development of the other European races, it might be well to take up a race which seems to belong nowhere, yet is everywhere—the Jews. As a general rule their muscular development is very poor; they are narrow-chested and thin-muscled. They suffer very little from congenital physical defects, but are an extremely neurotic people with a tendency to psychoses in adolescence. They have very little tendency to alcoholic intemperance. While the largest sufferers from hernia—their predisposition to this condition is only a manifestation of weak abdominal muscles accompanying a general muscular deficiency—the Jews, also, have a tendency to age prematurely.

The Jews are said to be comparatively free from tuberculosis—owing to an immunity gained by living, for many centuries, in crowded and unsanitary ghettoes. Besides, unlike the Italians or the Irish, they never engage in occupations beyond their physical capacity. When they do, they contract tuberculosis just as frequently as other peoples. In this country they are engaged largely in the garment trades, occupations entailing close confinement, very long hours of labor and poor hygienic surroundings; and among them tuberculosis is very common.

In the light of the poor physical development of the Mediterranean peoples, explained in part on the ground of the frequency of crossing among those races, how can the physical inferiority of the Jews be explained, who have practically never crossed at all, but have remained racially pure?

If, on the Mendelian doctrine, they were a race of muscular "dominants" in biblical times, they should still be so. The Jews, however, have gone to the other extreme in their racial purity. They have been too close in-breeders, resulting in what might be called "racial consanguinity or incest." Breeding of this kind, while not productive of the physical defects of promiscuous breeding, results in the production of a highly sensitive but weak organism with marked neurotic tendencies, which tendencies are so greatly exemplified by the Jews. Or their continual wandering may have caused a "racial fatigue" and be the reason for the physical inferiority. Besides, their frequent migrations have not allowed them to engage in any definite occupations, but forced them

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to engage, on a larger or smaller scale, in trading, an occupation hardly conducive to muscular development, but, in fact, tending to cause atrophy from disuse.

But in the countries where they have been allowed the privileges of their neighbors, their original sturdiness has asserted itself; they have mixed freely with their neighbors and intermarriage has especially been productive of good types. In this country the Jews have a large representation in athletic circles.

Coming to the Slavic races, their most numerous representatives are the Russians. The peasantry are among the finest specimens of muscular development; they are a hard-working agricultural people. But even those from the larger cities are well developed. Of the other Slavic races the Servians, Croatians, Bulgarians, Slovenians, etc., have good physiques. The Poles have the poorest, owing, no doubt, to the many exhausting wars in which they have engaged and which have had the effect, so to say, of devitalizing them.

The Germanic races, which, for the purpose of this paper, may include the various German principalities, the Dutch, the Scandinavians and the German Swiss, are, on the whole, good specimens of physical development. The Dutch farmer is a particularly sturdy person. He breeds a large family of well-developed children; from thirteen to fifteen is a number not uncommon in one family. The Danes, from their proximity to the Germans, closely resemble the latter in their physical characteristics. The Norwegians and Swedes are without reservation the finest types of physical development, with the Norwegians probably the better of the two.

A defect among the Germans, which has recently evoked marked comment, is myopia. The Germans are even to-day the greatest exponents of the sciences and the arts in almost every branch. Is it not possible that a race so largely engaged in occupations requiring the close application of the eyes, would change physically to conform to just such needs? For it is well known that myopes have the advantage of being able to magnify near objects. This is not advanced in explanation of the German predisposition to myopia; at any rate, it offers an interesting field for investigation and possibly for preventive optics. In the north of Germany, among the Danes, there are many albinos, individuals having a lack of pigmentation in the chorioid of the eye with resulting defect of vision.

The Magyars, originating with the Finns in Asia, have in the centuries gone by entirely lost their Tartar characteristics from frequent intermixture with their invaders. The peasantry are an especially well-developed people.

The French have good physiques. The Belgians, of whom the greater part are Flemish, are also well-developed. The Swiss partake of the characteristics of the races to which they belong.

On the British Isles we do not find the muscular sturdiness of the continental northerners. The English are the better developed, the Irish the poorer. In so far as the Irish are concerned, their poor physiques are due to their extreme poverty and the consequent undernutrition. It is a significant fact that the Irish from the country are even more poorly developed than those from the cities. This may be due to the fact that in the country they live almost entirely on vegetables, consuming very little fresh meats. Fresh meats are absolutely necessary to muscle-building, even though vegetarians claim to the contrary and cite instances of athletes accomplishing athletic feats on a vegetable diet. These persons are the exceptions and not the average. Besides, the ordinary labors of life and especially those of the poor people are far more exacting and arduous than the most difficult of athletic feats. Furthermore, the ingestion of proteids is absolutely necessary to conserve the proteid of the body. May not the tendency of the Irish to alcoholic intemperance be dietetic in nature, and an attempt by Nature thus to conserve the proteid of the body? May not the absence of a meat diet be responsible for the notoriously bad teeth of the Irish peasantry? May not also the large number of pelvic deformities among Irish women be dietetic in nature?

The Irish are particularly prone to tuberculosis, but not while they continue on their own poverty-stricken farms, encountering no new adversity. When, however, they come to this country and encounter the keen competition rampant here, they seem to lose their staying-power and a great many contract tuberculosis. On the other hand, probably on the doctrine of the "survival of the fittest," those who weather the conditions at first, later on improve wonderfully, and it is then that we get the "burly" Irishman. He is really a product of this country—a regeneration of a being previously held down by adversity.

What interests us most as students of eugenics in the physical development of the European peoples is whether, in view of the great influx of people from that continent into this country, a crossing of our blood with that of races having a much poorer physical development, will have a deleterious effect on our own physical stamina, whether a crossing with the better northern races will have a tendency to improve our own standard of muscular development, or whether there will be no effect. If we take the view that the poorly developed races of Europe owe their underdevelopment to a distinct degeneration or atavistic retrogression in the evolution of man, due in part to the frequent crossing between widely different races, then their coming here in very large numbers might have the same effect. If, on the other hand, we take the view that their poor physiques are due only to their extreme poverty, poor hygienic surroundings, ignorance and disease, then their coming here—if properly distributed—can but elevate people who can be elevated in no better way. At all events, southern Europe offers a very fertile field for, what might be called, "philanthropic eugenics."

Aside from the effect on our own physical stamina of the ingestion of a great number of physically inferior people, our own mode of living is fast converting us into a race of Lilliputians. There is an undoubted trend away from work involving the use of muscles. We are breeding a race of people with big minds and little bodies. People are willing to engage in occupations far more arduous, though less remunerating, as long as it is not "menial." The trend in this direction is poor economy because our bodies are unable to supply the divers needs of an overactive mind. Overactivity of the mind leads to physical exhaustion just as the exhaustion in manic conditions is due to an activity of the mind out of proportion to the power of the body. In every large center we see evidences of the "strenuous life," in the people who walk with their heads down, fists clenched and looking neither to the right nor to the left as if they were "bucking" a foot-ball line. It is a constant nervous strain — "the pace that kills," and in bodies often so puny that the pace does not last long. This might be well enough if we devoted ourselves to methods to counteract this tendency and to keep up the balance

between mind and muscle, namely, systematic physical training or exercises. Without this we will surely degenerate into a race of weaklings, neurasthenics and preseniles.

There is a tendency now to a too early education of the infant, together with a "high-pressure" system of teaching enforced through frequent competitive tests. In ancient Greece children were not educated at all before the age of 8. Now we start the child at the age of 6, and if many parents had their way it would be at an earlier age. There is nothing lost in delaying the education of the child until a later age, because the intelligence and comprehension develop very rapidly without the stimulus of education. A child whose brain is not befogged by too early an attempt at education grasps its learning much more quickly later on. Were the two years, from 6 to 8, spent in preventing the development of any tendencies toward physical defects or correcting those that have already developed and in forming in the child the habit of physical exercise, the time would be more profitably spent. Inculcate in the mind of the child the desirability of a "sound mind in a sound body."

In respect to a good physique, therefore, a proper start in life is also essential. Of course, the diseases of childhood, of which rickets stands foremost and rheumatism next, retard the physical development of the child, but with the enlargement of the field of preventive medicine these causes will soon cease to exist.

While hernia, in the adult, is a frequent accompaniment of a weak musculature over the abdominal wall, neurasthenia is by far the most common result of a poor muscular system. It is the result of a poor muscular system being overstimulated by a too active brain. The most characteristic examples of the muscular nature of neurasthenia are the various trade cramps — writers', telegraphers', etc. One hardly expects to find these conditions in robust muscular individuals, but only in thin, pale and scrawny individuals. Eye strain—muscular—is another example of this condition.

In women a very serious manifestation of a poor musculature is dystocia uteri. This is almost entirely due to a weak uterine muscle, the result of the lack of exercise which the modern woman takes. It is, on the one hand, the "hot-house woman" who never walks or submits herself to the elements, and, on the other hand, the "factory-woman," who does work — "the drudgery which forms one of the attributes of civilization—it is superhuman toil which allows of no repair"—but quite beyond her capabilities.

Commonly a poor muscular system is accompanied by an insufficient chest development and expansion. This is brought about by deficient power in the auxilliary muscles of respiration; the resulting insufficient expansion of the lungs undoubtedly predisposes to pulmonary tuberculosis.

Weak and poorly developed muscles, especially in children, are common causes of curvature of the spine and flat-foot. The former condition is due to the lack of the proper balance of the spinal column, given to it by normal muscle; the latter is due to weakness in the plantar flexors and invertors.

The remedy for the increasing tendency toward muscular degeneration and its allied conditions lies in exercise by muscular movement. "Exercise stimulates the entire network of the circulation, and the vital processes resulting from it, without their being exhausted but rather benefited by it." It is the rational means for the maintenance of the general health. Exercise means regeneration through an increased circulation, accompanied by the throwing off of waste products, and should, therefore, be accompanied by proper and frequent bathing in order to carry off the waste products thrown off by the skin.

Here also, excesses are baneful; too much exercise of mind and body means collapse, while devotion entirely to muscle means its development at the expense of the brain. There is a happy medium within which we could breed a race of people in whom brain and muscle would be equally divided.

"Roman gladiatorial barbarities were not exercises and are not to be compared to Athenian exercises. The decay of Rome and Greece was marked by pensile baths and beds for the wealthy, and barbarous exhibitions for the masses. A desire to witness the danger and even the destruction of others is usually most prominently exhibited by those who would be the least likely to share them themselves. The poorer the muscular development of a race, the greater its admiration for prowess."

With the increase of physical education there will be a diminution in the desire for the cruel sports such as bull-fights, cock-fights, prize-fights, etc., for these sports are popular only in countries where there is a tendency to such degeneration. "Failing and lost power raises an arena in which are enacted scenes shocking to a healthier sense." If athletics of the "sane and safe" kind were more common and universal there would be little enthusiasm for the barbaric sports. The necessity for therapeutic physical exercise arises only from the fact that the trend of civilization is away from work involving the use of the muscles. Where the ground is cultivated there is little need for artificially devised exercise. When the luxury of city life increases there is less desire to toil in the country, and although the present cry is: "Back to the farm," every one seems to desire "the short life and a merry one." Socrates said of exercise: "The strength of the body is destroyed by violence and idleness but preserved by exercise.
shun satiety of food and frequently exercise the body." Modern high livers eat plentifully and exercise very little; and while there is some increase in weight it is due to fat and not muscle, being in fact a fatty degeneration of the muscles.

The realization of the rapid decline of muscular development has, however, stimulated exercise enormously, but thus far only those who need it least have been lured to it—namely, the robust minority. The spectators are enthusiastic enough, the greatest enthusiasm going to the sports requiring the greatest endurance, yet it is but the enthusiasm displayed in all games of chance. In order to develop the muscular system it is important to take up each group of muscles and develop them separately, not merely improving their esthetic value, but also their power of endurance. In the process of exercise one should never fatigue, nor should one endeavor to be "in trim," "in form" or "trained to the minute." These terms mean the attainment of a "maximum at which one can maintain oneself only for a minute." Systematic exercise, however, causes a marked increase in volume, strength, elasticity and tone of the muscles, because exercise increases the circulation and hence the nutrition of the muscles and of the entire body. Not the increase in the number of

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fibers is aimed at through exercise—that remains the same—but an increase in the volume or "cross-section" of the individual fibers and consequently of the entire muscle. The hyperemia which accompanies contraction causes hypertrophy of the individual fibers.

Physical education should, of course, begin during childhood. The year or two spent in kindergarten play might be devoted to a systematic physical training suitable to age, sex and physical condition of the child. Burdening the mind of the child with preliminary education is useless and must be gone over again; it leaves no real impression. Throughout the child's schooling it should be given only as much mental work as its physical condition warrants. Forced education at a high pressure is harmful; it does not increase the child's worth, while it retards its physical development. During the school course as much attention should be paid to the physical training as to the mental. It should be an actual part of the curriculum—not the waste of an hour or two in the gymnasium, usually given over to play—which play, as such, should be encouraged — only it should have its own time. The instructor is usually too busy with the athletes of his class to give any attention to those who need it most. There is too much pride taken in athletic feats and too little in physical attainments.

The instructor should have an actual record of the physical status of each one of his pupils, noting physical defects as they appear, and to those should be directed his efforts at improvement. A tendency to curvature of the spine should direct the instructor's attention to exercises tending to strengthen the muscles affected; a tendency to flat-foot should receive appropriate muscle-treatment; narrow-chested children should be taught appropriate breathing exercises. Why not home-work in the physical exercises as in the mental—home-work in the particular kind of exercises the child needs? Enlist the aid of the parents, which can easily be done by explaining the purpose in view; let the child's efficiency rating depend on the results. To accomplish this it would be necessary not merely to have an athletic instructor, but one who has perhaps less of that quality and more knowledge of the human body — possibly a physician—but one, at least, who has a working idea of the anatomy of the human body.

In our colleges, where so much attention is paid to sports and athletics, real physical culture in the entire student body is not encouraged. All the attention, and the only attention is paid to those students who can bring home "honors" to the institution. Athletes are persuaded to leave other colleges, expensive "coaches" are hired, delinquent students are given private tutoring at the expense of the athletic associations, but to the real improvement of the real student body no attention is paid.

In conclusion, it might be well to note that, aside from the ability of a well-developed muscular system to endure the physical hardships of life, a good musculature is necessary in order to have a healthy body; that muscular development is influenced by climatic, dietetic and hygienic conditions; that frequent crossing between widely different races seems to lower the standard of physical development, as well as a too close in-breeding; that, while civilization tends to a physical deterioration in general, much can be done to check this tendency through intelligent, systematic physical education, begun in childhood and continued throughout life.

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LOCALIZATION OF SPIROCHÆTA PALLIDA IN THE HEART-MUSCLE IN CONGENITAL SYPHILIS

IN THE ABSENCE OF HISTOLOGIC LESIONS OR SPIROCHETES ELSEWHERE IN THE BODY *

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DETROIT

CASE 1. *Patient.*—Infant, aged 2 months and 20 days; weight, 6 pounds, 6 ounces (2,890 gm.); length, 68 cm. The father had syphilis six years ago and gonorrhea eight years ago. He was married five years ago, after one year of antisyphilitic treatment which was continued for half a year after marriage (mercury inunctions). There have been two children and no abortions. The first child had ophthalmia neonatorum but recovered and is now apparently well. The second child (the patient in our case) also had ophthalmia neonatorum, for which it was admitted to the Detroit Children's Hospital. A purulent discharge and corneal ulcers were present in both eyes, and gonococci were demonstrated in the pus. The skin of the infant's body was rough, the palmar surfaces and the soles of the feet were rough and cracked. The mouth, nose and anus showed small erosions and fissures. The scalp behind the ears was roughened and eroded. While in the hospital the face and buttocks became very sore and ulcerated extensively. The infant lost weight rapidly, temperature became subnormal; food was refused, and death occurred from inanition. No spirochetes were found in the discharge from ulcers.

Macroscopic Examination.—Autopsy, performed by Dr. Snyder, showed the following conditions, only the most important features of the protocol being given here: Emaciated body. Palms of hands and soles of feet very rough; small ulcers and erosions on nose, mouth and anus. Panniculus absent; muscles very small and pale on section. Intestines distended. Position and relations of abdominal organs normal. Diaphragm in normal position. Weight of thymus, 12 gm., fibrous in character. Mediastinal lymph-nodes enlarged. Weight of heart, 35 gm. Cavities dilated; muscle very soft and light in color. Numerous small, whitish, translucent nodules beneath the epicardium. On section of the heart-muscle, similar pale, translucent areas seen throughout the muscle. Valves and endocardium normal; coronary vessels prominent and firm. Weight of right lung, 70 gm.; left one, 68 gm. Flesh-colored upper lobes; very marked hypostasis in lower lobes. Left lung adherent to pleura, particularly over the eighth and ninth ribs. Bronchial nodes enlarged, hard and firm, appearing fibrous. Kidneys pale; outline of structures not clearly seen; capsule somewhat thickened; fetal lobulations; weight of right, 28 gm., left, 25 gm. Spleen not

* From the Pathological Laboratory of the University of Michigan.

enlarged; firm. Weight of liver, 135 gm.; firm; numerous pale areas. Gastro-intestinal tract and genital organs, negative. Mesenteric lymph-nodes enlarged.

Microscopic Examination.—Tissue was taken from all parts of the body except from the skin and fixed in a 10 per cent. formaldehyd solution. Part of it was put through the Levaditi method, while blocks from each organ were put through the ordinary paraffin, hematoxylin and eosin method.

Hematoxylin and eosin sections showed no characteristic changes of congenital syphilis in any organ or tissue except the heart. In this organ the pale, translucent areas showed the characteristic pale degeneration of the muscle-fibers, epithelioid proliferation of the stroma, cellular infiltrations, fatty degeneration, etc., described by one of us elsewhere as characteristic of congenital cardiac syphilis.[1] In the Levaditi preparations those areas showed enormous numbers of spirochetes. In the Levaditi preparations of all other internal organs no spirochetes were found by Dr. Snyder. The material was then brought to Ann Arbor and control preparations made by Dr. Warthin with the same result. No histologic lesions of syphilis and no spirochetes were found in any organ or tissue except the heart-muscle. This organ showed throughout its wall numerous characteristic areas of degeneration and proliferation of the stroma, each area corresponding to a spirochete colony. As far as the internal organs of this case are concerned, we have example of the localization of spirochetes and tissue-changes to a single organ, the heart. No sections were made of the small erosions and ulcers about nostrils, mouth and anus, so that the presence or absence of spirochetes in those was not determined.

CASE 2. *Patient.*—Illegitimate infant, 8 days old. The mother presented no signs of syphilis. Placenta showed no microscopic signs of syphilis. The child developed "snuffles" a few days after birth, and a papular eruption over the palms of the hands and soles of the feet. It died of "asphyxia."

Macroscopic Examination.—Autopsy by Dr. Warthin. All abdominal organs showed an acute passive congestion, but no macroscopic evidence of syphilis. The lungs were congested and edematous, but presented no characteristic "white pneumonia." The heart was much enlarged, its cavities dilated, and its walls greatly thickened (from two to three times normal thickness), the muscle being much more pale than normal. In the anterior wall of the heart, just over the ventricular septum, there were two light-colored, translucent nodules, jelly-like in appearance, resembling myxomatous tissue. These nodules were raised above the epicardium, each one being about 1 cm. in diameter. On section they were found to be nearly round and to extend entirely through the heart-wall from the epicardium, to the endocardium, projecting on both surfaces.

Microscopic Examination.—Smears of the cut surface of the heart showed the presence of numerous spirochetes, and in the blood from the liver, when examined by the dark-field method, spirochetes were also found. Portions of the cardiac nodules (half of each) were prepared by the Levaditi method, the other half prepared in the ordinary method and sections stained in hematoxylin and eosin. The light areas were found to consist of a gelatinous connective-tissue giving a strong reaction for mucin with mucin-stains (Kresyl-echt-violett). Traces of atrophic muscle-fibers were seen in this new tissue, particularly at its periphery which was rather sharply defined. In the Levaditi preparations these myxoma-like nodules were found to be full of spirochetes. Smaller areas throughout the muscle-wall presented the same picture of syphilitic myocarditis, previously described, and in the Levaditi preparations these also contained spirochetes. Neither the lungs, spleen and liver, nor any other internal organ showed any microscopic lesions of congenital syphilis, and in the Levaditi preparations no spirochetes could be found anywhere except in the heart. The skin lesions were not examined microscopically.

The two cases are important for a number of reasons. They throw light, in a unique way, on the important question of the localization of spirochetes within the body, and the "concentration" of the infection in a single organ or tissue. The fact that the heart may show marked lesions in cases of congenital syphilis when the liver, lungs and spleen show no changes at all and no spirochetes, has a great practical importance in pathologic diagnosis, since in ordinary routine work signs of congenital syphilis are usually looked for in these organs alone. These cases also add emphasis to the view, expressed by Warthin, that the heart-muscle is a favorite place for the colonization of the *Spirochæta pallida*, and that the macroscopic signs of such a localization may be so slight that the question of syphilis can be determined only by the demonstration of the spirochetes.

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1. Warthin: Am. Jour. Med. Sc., March, 1911, p. 398.

A CASE OF LEPROSY IN INDIANA

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History.—The patient, a colored woman, aged 60, born in Hawkins County, Tenn., twice married, is the mother of six children, of whom two are living. There is no history of any former illness. The woman has never been farther south than Chattanooga, for a brief visit, nor farther north than Chicago, where she remained two weeks during the World's Fair in 1893. She was a free woman, well bred, and from her thirteenth to her thirtieth year she was servant in a family in Knoxville, where most of her life has been spent. Three years ago she removed to Indianapolis, and has not left the city since that time. The history of her affliction dates back indefinitely five years, when a brownish-red papular lesion appeared over her brow. One year ago her arms, trunk and legs were also affected with dark blotches, with slightly elevated margins simulating those of lichen planus; there were small, irregular elevations running together to make the flattened patches, as in that disease. The itching was intense, and led her to become a patient of the city dispensary, where she was seen and treated a number of times. A nodule, small and red, one-half inch in diameter, appeared on her cheek. At about this time she left the dispensary and remained at her home for three months. During this period the lesions grew rapidly, but she did not return to the dispensary.

Examination.—Dec. 19, 1911, she was visited at her home by Drs. A. W. and N. D. Brayton and Dr. Bernard Erdman. Nodulation had progressed with amazing rapidity; the ears, face and scalp presented numerous nodules, becoming confluent and ranging in size from a pea to a silver quarter in diameter, and from one-sixteenth to one-quarter of an inch in elevation. Bleeding and oozing were easily provoked by friction of clothing or rubbing the nodules with a bit of gauze. The nodules were markedly anesthetic. Alopecia of the lids and brows was present. A slight thickening of the left ulnar nerve was detected. There were, however, no arthropathies; no perforating ulcers, bone-lesions or eye-lesions. Hyperesthesia existed in recent erythematous patches on the legs. The thermic and pain senses were not involved. The general health of the patient was excellent. She ate and slept well; her temperature was only one-half degree above normal.

Diagnosis.—The clinical appearances were distinctly those of acute nodular leprosy. Smears were taken from an excised section of a nodule on the ear. The lepra bacillus was readily demonstrated by the usual methods of staining. Smears and sections were again taken December 21, 23 and 27, with the same results. The organism was found in clumps and also separately. They were abundant, but not as numerous as in some reported cases. Smears from the nares were negative; there was no catarrh; no affection of the throat, mouth or other mucous membranes. The characteristic, acid-fast, beaded, curved and slightly tapering forms of the bacillus of Hansen were apparent. There were no evidences of tuberculosis or syphilis. The Wassermann reaction proved negative in blood taken and tested by Dr. John R. Thrasher of the Indiana University School of Medicine.

December 27, I reported the case to Dr. J. N. Hurty, secretary of the Indiana State Board of Health, as a clinically and microscopically verified case of nodular leprosy. Photographs were secured. The case was then referred by Dr. Hurty to the City Health Board of Indianapolis.

Treatment.—Jan. 1, 1912, at the request of the Indianapolis City Board of Health, Dr. Ralph Hopkins, of New Orleans, the visiting physician of the Louisiana Leper Home, was invited by the city health board to confirm the diagnosis and to give advice out of his large experience with leprosy in New Orleans and the State of Louisiana as to the care, treatment and relations of the afflicted person to the community. Dr. Hopkins reported the case as one of the most notable—on account of the rapid growth, multiplication and confluence of the leprous nodules—that he had ever seen. His examination of the case was very complete, including history, clinical features, microscopic sections and also examinations of the associated members of the family—sister, daughter-in-law, and a grand-daughter 12 years old. These persons were not affected. Dr. Hopkins advised the usual treatment of chaulmoogra oil, strychnin, rest, abundant feeding, daily morning and afternoon baths in borated and soapy waters, and the use of petrolatum freely as an unguent.

Facies of typical and extremely rapidly developing nodular leprosy in a colored woman, aged 60. First lesions observed in 1907. All nodules except one have developed since September, 1911. The entire back is also nodular, the arms to the elbows and the legs to the knees. Picture from the collection of the Indianapolis City Board of Health, taken Jan. 26, 1912.

Conjectural interest in the case centers in the unknown manner of the patient's infection, since she is a native of Tennessee, and never has visited the coast regions of the country, or been outside of her native state except as above mentioned. She has, however, for many years, been in the habit of eating salt mackerel and herring and other dried and preserved sea-fish; this may appeal to the Jonathan Hutchinson school, which regards leprosy as caused from the eating of fish products infected with leprosy.

The usual scientific interest precipitated by the occurrence of a rare disease has been developed, and the organism will be grown, if possible, after the manner of Duval, of Tulane University Medical School, as treated in his various articles on the cultivation of the lepra bacillus. These researches will be carried out in the laboratories of the University School of Medicine.

The patient is isolated in her home and is receiving the considerate medical attention necessary to her welfare and the protection of the community.

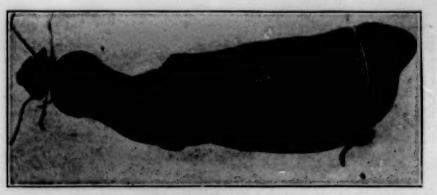
CYSTIC APPENDIX VERMIFORMIS OF UNUSUAL SIZE

ROBERT A. NOBLE, M.D., BLOOMINGTON, ILL.

The following case is reported because of the unusual size of the specimen.

Patient.—N. T., a woman aged 42, single, patient of Dr. G. R. Smith, was seen in consultation at St. Joseph Hospital, Jan. 4, 1912. During the past six years she had experienced repeated attacks of abdominal pain of general distribution, with occasionally more localized pain in the right iliac region. These attacks of pain were accompanied usually by nausea and vomiting. Increase in the pulse-rate or temperature elevation was rarely observed. She complained of excessive bloating and that abdomen was frequently painful to pressure. There was chronic constipation; menstruation fairly regular, at no time painful.

Examination.—At the time I saw the patient she had been confined to her bed about one week, during which time she had had violent pain throughout the abdomen localizing in right lower quadrant. The abdomen was painful to pressure on left as well as right side. There was no rectus rigidity. Bimanual examination showed a tumor of some size high up in the right side of the pelvis which seemed to fluctuate and which did not seem to be connected with the uterus, which latter was enlarged. The condition was thought to be an ovarian cyst together with appendiceal disease and laparotomy was advised.



Cystic appendix vermiformis of unusual size

Operation.—Jan. 5, 1912, the patient was operated on under hyoscin (scopolamin), morphin and strychnin and ether anesthesia. A 3-inch incision was made to the right of the median line from the pubis upward and the abdominal cavity was opened. Examination of the abdominal cavity through the incision showed the uterus to be somewhat enlarged and on the posterior surface was discovered one small pedunculated fibroid. The right fallopian tube was cystic at the distal extremity. The right ovary was normal; the left ovary contained a monolocular cyst, the size of a walnut. The left tube was normal. In the right pelvic region was seen a large fluctuating tumor somewhat bound down with adhesions, which proved to be the appendix vermiformis given off from the cecum close to the ileocecal junction.

In the fresh state this appendix weighed 5 ounces, was 7¾ inches long, 5¾ inches in circumference at distal end and 3¼ inches in circumference at proximal end.

Be Skeptical as to What is Impossible.—Every now and then the impossible becomes possible. A professor once made the following bright reply to one of his students who had declared that a certain work was impossible: "Yes, of course, it is impossible; but if you and I do not watch out, some fool will come along and do it right before our eyes."

REMOVAL OF FOREIGN BODY FROM THE RIGHT BRONCHUS *

FRANK C. TODD, M.D.
Professor of Eye, Ear, Nose and Throat Diseases, University of Minnesota
MINNEAPOLIS

Patient.—Margaret T., aged 3½, had a choking attack Nov. 3, 1910, which led the mother to believe that she had inhaled some foreign body. The attack subsided, however, and a physician was not consulted, the family living on a farm where one was not readily to be had. During the next ten days, however, there were recurrent attacks of difficult breathing, hoarseness and choking. Ten days after the initial attack a physician was consulted who found difficult breathing, and laryngeal diphtheria was suspected. Dr. C. A. Smith was called into consultation and came to the conclusion, from the history of the case and the symptoms present, that a foreign body had been inhaled. The difficulty in breathing seemed localized in the larynx. An *x*-ray picture was taken of this locality (the exposure for which picture, however, did not include more than the trachea, and hence did not show the region of the bronchi and no foreign body could be seen in the negative). Despite this fact, Dr. Smith persisted in the opinion that a foreign body was present and called into consultation Dr. Little, who concurred in the diagnosis and brought the patient to my office. This was on the eleventh day after the first attack.

Examination.—The child walked into my office but the breathing was so noisy that it could be heard across the room. When an attempt was made to give chloroform on the table the

Jackson bronchoscopic tube and distorted double-pointed thumb-tack extracted from bronchus in a girl aged 3½.

patient became immediately cyanotic so that the administration could not be continued, it being necessary to place the child in a sitting position to restore breathing. A second attempt was made with ether with the same result. Then it was found that the patient could not breathe in the recumbent position. The bronchoscope was therefore entered without anesthesia and it was found that the difficult breathing was due to an edema of the glottis, but there was no foreign body present in the larynx. The bronchoscope was passed through into the trachea. The examination had to be discontinued because of the condition of the patient, breathing having ceased and the child being cyanotic.

Operation.—The child was then unconscious and an immediate tracheotomy was performed, by Dr. Little, without an anesthetic. An important point was observed in the performance of this tracheotomy in that an attempt was made, which proved successful, to avoid bleeding, so that in the steps following the operation we were not annoyed with blood in the bronchi. The operation resulted in a restoration of good breathing but it was necessary to cocainize the trachea and bronchi before the bronchoscope could be introduced. The difficulties even then were great, as the patient had to be firmly held during the operation and the smallest-sized tube only could be used. In one hour and a half from the time we had started to operate, I discovered what looked like a pin lying across the right bronchus. It had seemed from auscultation and from the appearance of secretion from the right bronchus and the absence of secretion in the left bronchus, that if a foreign body were present it must be located on the right side. The character of the foreign body was entirely unknown to us and we did not have any time to subject the child to an *x*-ray examination. The tubes were exceedingly small, corresponding to the size of the child. Even after discovering what appeared to be a pin, there was great difficulty in extracting it, owing to the fact that the ordinary foreign-body instruments could not be used in such a small tube and with the necessary sponging and manipulation the foreign body disappeared from view time and again. Finally, however, after one hour more of effort, the small alligator forceps was successfully introduced and the jaws expanded immediately on their exit from the tube and brought down on the pin, which had been previously located in relation to the mouth of the tube so that it was transversely across the end of the bronchoscope. The long alligator forceps, when introduced, obscured the vision so that I could tell that I had reached the end only by the fact that the tube allowed the jaws to expand. As soon as this occurred, I brought them tightly together on the pin and removed the bronchoscope, forceps and foreign body all at one time, as it was evident that the foreign body could not be brought through the bronchoscopic tube. We then found that we had at the end of the tube a brass thumb-tack with two crooked sharp points, and it was evident that the brass end had been situated in a bronchiole allowing only one of the pins to project into the bronchus. The picture shows the foreign body removed and also the forceps and Jackson tube used and the exact grasp that was secured on the foreign body. Improvement in breathing took place at once.

A tracheotomy tube was inserted and left in for one day, after which the wound was allowed to heal and in one week the child left the hospital well, no complications having ensued.

It is probable that in this case the foreign body may for a time have been lodged in the larynx, or, at least, it produced sufficient trauma in the larynx to cause the edema which gave rise to the noisy and difficult breathing and the necessity for the performance of tracheotomy.

A lesson which may be learned from this case is that in an *x*-ray picture of cases of foreign body entering the respiratory apparatus, the entire area, mouth and lungs inclusive, should be exposed. A good *x*-ray picture giving the location of this foreign body and its character would have been a great aid in its extraction.

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* Reported before the Minnesota Academy of Medicine.

A CONTRIBUTION TO THE STUDY OF RAT LEPROSY *

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It has been the hope of those interested in the investigation of human leprosy that much information might be gained by careful study of a disease occurring in rats, clinically similar in a superficial way to leprosy in man, and caused by a bacillus morphologically indistinguishable from the *Bacillus lepræ* of Hansen.

Since Stefansky's[1] first observation of this disease among the rats of Odessa, similar observations have been made in many parts of the world, notably in Berlin (Rabinovitsch[2]), in London (Dean[3]), in New South Wales (Tidswell[4]) and in San Francisco (Wherry[5] and McCoy[6]).

* From the Division of Bacteriology, Medical Department, Stanford University.

1. Stefansky: Centralbl. f. Bakteriol., xxxiii, 481.
2. Rabinovitsch: Centralbl. f. Bakteriol., xxxiii, 577.
3. Dean: Centralbl. f. Bakteriol., xxxiv, 222; Jour. Hyg., v. 99.
4. Tidswell: Cited by Brinckerhoff in "The Rat and Its Relation to Public Health." Treas. Dept., Washington, 1910.
5. Wherry: The Journal A. M. A., June 6, 1908, p. 1903; Jour. Infect. Dis., v, 507; Rep. U. S. P. H. and M.-H. S., xxiii, 1841.
6. McCoy: Rep. U. S. P. H. and M.-H. S., xxiii, 981; abstr. in The Journal A. M. A., Aug. 22, 1908, p. 690.

The great hygienic importance of the possible identity of the disease of rats with that of man, together with the experimental advantages incident to the ease of transference of the former disease from rat to rat, have led to an already considerable collection of facts regarding rat leprosy. Much light has been thrown on the distribution of the disease in various parts of the world by the studies of Brinckerhoff;[7] the relationship of the bacillus to that of human lepra has been studied, by means of complement fixation, by Mezinescu,[8] and more recently by Schmitt;[9] and accurate reports on the pathologic features both of the spontaneous and experimental occurrence of rat leprosy, and on probable modes of transmission have been made by Wherry[5] and McCoy.[6]

Since the chief purpose of this paper is to present experiments on the cultivation of the bacillus of rat leprosy and the observation of bacteria in tissue-plasma preparations and since, in the main, our observations on the pathology of the experimental disease merely serve to confirm the observations of the last-named authors, this phase of the subject will be alluded to very briefly.

Our original strain was obtained through the kindness of Dr. George W. McCoy and has been kept alive by passage through white rats. In agreement with other observations, subcutaneous inoculation has usually given rise to extensive lesions in the deeper layers of the skin, with secondary involvement, often, of the inguinal and axillary lymph-nodes and occasional, sparsely distributed bacilli in the macroscopically normal liver, spleen and lungs. In a few instances there have been small isolated white tubercle-like abscesses on the liver and spleen, rarely on the kidneys, consisting of masses of the bacilli, and in one intravenously inoculated rat there occurred extensive infection of the liver, the entire organ appearing greyish-pink, and containing throughout its friable tissue myriads of the microorganisms. It has also been possible to produce, with considerable regularity, localized nodules in guinea-pigs. These, when left undisturbed for six months, in all cases went on to complete healing.

Attempts to cultivate rat leprosy were begun by one of us in conjunction with Dr. M. C. Terry, of this laboratory, about a year ago. In spite of the negative results of other workers, our first attempts were made by the employment of all the usual laboratory mediums, with and without the addition of glycerin, rat-serum, rat whole blood and rat organs. Cultures were made aerobically and anaerobically, at 37.5 C. and at room temperature, in the dark and in diffuse light. All these attempts had negative results.

In the next series of experiments it was hoped that the growth of the bacilli in the subcutaneous areas of the rat, where adipose tissue is normally located, might indicate a need for fats. Cultures were made on Dorsett's egg medium, to which fats in the form of butter fat and rat fat had been added, with and without glycerin. No results were obtained.

Simple symbiosis on various mediums, both aerobic and anaerobic, with the spirillum of cholera, *Bacillus typhosus*, *Bacillus subtilis*, *Bacillus coli communis* and *Staphylococcus aureus*, gave negative results, the cultures being observed at varying intervals for several months.

At the same time, it was attempted to carry out, with this bacillus, the technic by which Clegg has succeeded in cultivating the bacillus of human leprosy. Symbiotic cultures of an ameba with the spirillum of cholera, with the colon and with the typhoid bacillus were made on ameba agar, and on these cultures rat leprosy bacilli were implanted, both before and after encystment of the amebas. In none of the plates and tubes, however, could an increase of the bacilli be determined.

Since the rat leprosy bacillus has recently been cultivated by this method by Hollman, it may well be that our entirely negative results were due to the variety of ameba used. It was not, as in Clegg's experiments, an ameba obtained from man or from the guinea-pig, but was a fresh-water form obtained from hay infusion and thriving best at a temperature of about 30 C., losing its motility in the incubator. Unfortunately we have not had an opportunity to repeat these experiments with an *Ameba coli*, and numerous attempts to obtain intestinal amebas from various laboratory animals proved unsuccessful.

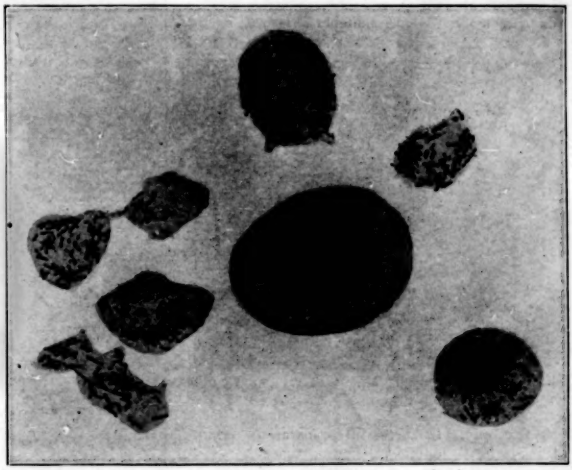

Fig. 1.—Rat leprosy bacilli in cells of embryo rat spleen growing in plasma.

The experiments in which definite multiplication of the rat leprosy bacilli was achieved were carried out by means of the technic developed by Harrison, Burrows, Carrel and others, for the growing of tissue cells in coagulated plasma. They were done in connection with attempts made at this laboratory to study the reactions between growing cells and various bacteria, in the hope of throwing light on the part played by the tissue cells themselves in immunity against certain microorganisms.

The technic in carrying out these experiments was, in the main, that used by other workers for plasma-

7. Brinckerhoff: In "The Rat and Public Health," Treas. Dept., Washington, 1910.
8. Mezinescu: Centralbl. f. Bakteriol., xlii, 664.
9. Schmitt: Univ. of California Pub., II, No. 3, p. 29. Gurd: Jour. Path. and Bacteriol., 1911, xvi, 1.

tissue growth. As a source of tissue we have used small pieces of spleen from rats not over 1 week old, since we have experienced considerable difficulty in obtaining satisfactory growths with adult tissues. We believe, also, that we have obtained more prompt and extensive cell proliferation when the animals from which the tissue was taken were not killed by ether or chloroform, but were killed just before experimentation by cutting rapidly through the cervical cord.

The plants were made on cover-slips over large hollow ground slides. The plasma was obtained in the usual manner by bleeding a young adult rat from the carotid, into small paraffined tubes set in a brine-ice mixture within large centrifuge holders. Minute drops of a thin emulsion of leprosy bacilli in salt solution were placed, with a very fine capillary pipette, on the flamed cover-slips; a very small bit of spleen tissue was placed in this, and the whole covered with a large drop of plasma from a paraffined pipette.

These preparations were then kept in the incubator at 37.5 C. and observed from day to day in a microscope chamber warmed by an electric bulb. In successful preparations migration of large stellate cells usually began within twenty-four hours. Within from twenty-four to thirty-six hours cellular extensions of projecting processes of the central mass would begin and the optimum growth was attained at the end of the fourth to the sixth day.

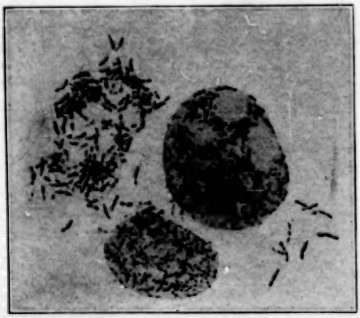

Fig. 2.—Rat leprosy bacilli in spleen cells growing in rat plasma.

Examinations of the preparations by staining were made at varying times, some being opened at the end of the first week, others not until two or three weeks had elapsed. The large number of unsuccessful plants in all of our experiments have served as controls for the few successful ones we have obtained. Further control was furnished by preparations of the original emulsion made on slides, on which larger quantities of the emulsion were placed than those planted with the tissues.

In two preparations examined after two weeks' incubation, an unmistakable and very extensive increase of rat leprosy bacilli had taken place. This increase had in both cases occurred intracellularly, within the large cells growing either separately or in small aggregations throughout the plasma. These cells, at first stellate, often with long protoplasmic processes, almost invariably became rounded and large, and coarse globules developed in the cell cytoplasm at a time (eighth or ninth day) when the tissue seemed to have ceased growing. Whether these cells represent splenic pulp cells or large endothelial elements from the blood- and lymph-spaces, we have no means of determining. Their size, appearance and arrangement, however, as well as their nuclear structure, seem to preclude their being regarded as polynuclear leukocytes.

When the preparations alluded to were opened and stained (carbol fuchsin, alcohol decolorization, counterstained with Jenner's solution), almost all the cells were found crowded with large numbers of the acid-fast bacilli. In some places the cells themselves were preserved fairly well and nucleus and cytoplasm could still be differentiated.

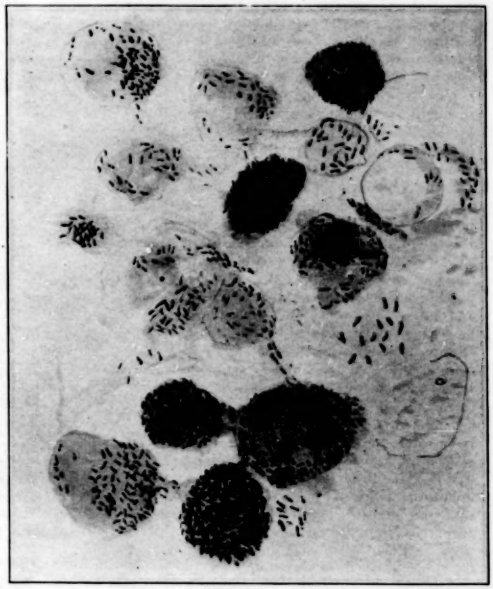

Fig. 3.—Rat leprosy bacilli grouped in the remains of dead spleen cells growing plasma.

In others, where the containing cell was represented only by a faintly stained granular detritus, the outlines of the masses of bacilli still indicated their original intracellular situation. These conditions are shown in the figures. Isolated extracellular bacilli were rarely numerous, never sufficiently so to indicate the probability of extracellular growth.

It was our hope that by frequent transference of the bacilli from such preparations to fresh plants gradual accommodation of the microorganisms to conditions outside the body might result, eventually, in their ability to grow extracellularly, and, finally, on mediums containing no cells. So far this has been unsuccessful, though further attempts, based on the analogous experience of Clegg with human lepra bacilli and amebas will

be made. Transference to fresh plants and subsequent growth does not add a satisfactory control to our experiments, since it is impossible in this way to avoid transferring many times the number of bacilli which are planted from a thin emulsion by means of the very fine, hair-like, capillary employed originally. Nothing resembling even the beginnings of an extracellular colony has been noticed by us. It is, moreover, not as a method of cultivation that our technic is of chief interest, but rather as admitting of the direct study of bacteria in their reaction with living tissue cells.

It is an interesting fact that in many unsuccessful plants the rat lepra bacilli, usually so resistant, have almost completely disappeared within a week or ten days. As this is in distinct contrast to a number of experiments carried out by Dr. M. C. Terry, in which the rat lepra bacilli were kept for periods of weeks in mediums containing large numbers of leukocytes, both polynuclear and mononuclear, without disintegration or growth, it would seem to indicate that the tissue cells may exert a destructive influence on these bacteria not possessed by the usual phagocytic cells.

While it is not the purpose of this paper to discuss at length the histologic features of rat leprosy, it is of interest in this connection to note that in preparations from lymph-nodes of infected rats we have often observed the bacilli almost exclusively intracellular. This corresponds to the observations, in human lepra, of Hansen and Neisser and the more recent ones of Gurd. It would appear, therefore, that, as in human lepra, in the disease of the rat the growth of the bacilli takes place within the tissue cells rather than in the intercellular spaces.

The technic developed during these experiments has encouraged us to believe that we possess, in the plasma-tissue preparations, an instrument of great value in studying directly certain phases of the reactions between tissue cells and bacteria not amenable to direct experimental approach in the past.

Dust in the Cotton Industry.—Dust is a prolific source of inefficiency and of morbidity in many industries. Among them is the cotton industry, in some phases of which the problem of dust is a serious menace to the health of the employees, and more recently vigorous and intelligent efforts have been put forth to overcome this difficulty. In the cotton factories, the carding-machines seem to be the source of the greatest amount of dust and employees in this branch are seldom able to follow their employment to a normal age. It is in stripping the carding-machines that the most dust is produced and employees have adopted the expedient of holding a bunch of cotton between their lips to avoid inhaling the cotton fibers. Various respirators have also been used which cover the nose and mouth; but in modern factories various devices have been used to impound the dust from the machines as it is made, mostly consisting of hoods fitting over the dust-making cylinders, the offending material being carried off by air currents. A number of such devices are pictured in the *Scientific American*, Dec. 30, 1911, and are described by J. H. Crabtree. The operation of stripping or cleaning the carding-machines needs only be performed a few times a day and requires only a few minutes for each machine. The apparatus is so arranged that the full force of the exhaust fan or blower may be concentrated on one machine, which gathers up all the dust as it is being cleaned. The exhaust apparatus may be used in the intervals for withdrawing bad air from the work-room generally. It is found that these improved forms of dust extractors work admirably and that the health and efficiency of the employees are improved, and also that the removal of the dust improves the quality of the finished yarn.

THE TREATMENT OF OCCLUDED "S"

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One of the most frequent defects in speech found among the illiterate or the defective is the occluded "s."

In making the normal "s" the tongue is pressed against the hard palate rather tightly, but a narrow groove is left in the middle so that a jet of air passes through. The method of palatography — a very thin black artificial palate covered with chalk is held in the mouth while the sound is being produced — gives a record like that in Figure 1A; the black surfaces indicate where the tongue presses against the hard palate. It is the jet of air through the narrow channel that produces the distinctive sound of "s."

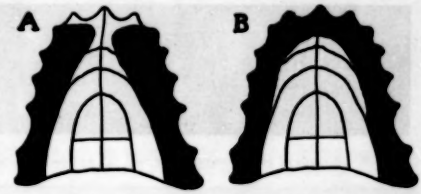

Fig. 1.—A, normal contact of the tongue with the palate in making "s." B, tongue contact for occluded "s."

Fig. 2.—Apparatus for making records of tongue-pressure. A small rubber bulb is held behind the teeth above the tongue. A tube from it transmits the movements by air-pressure to the recording apparatus; this draws a white line on the moving surface.

A child with the occluded "s" apparently uses "t" and "d" instead of "s" and "z," saying "tun," "toap," "toup," instead of "sun," "soap," "soup"; or "dode," "Liddy," instead of "doze," "Lizzy."

A palatogram for the occluded "s" is given in Figure 1B. The black surface shows that the tongue stretches across the front of the palate and thus closes the narrow channel.

If a small rubber bulb placed between the front of the tongue and the palate is connected to a manometer or a registering apparatus (Fig. 2), the force of the pressure can be indicated. For an occluded "s" it is greater than for the ordinary "s" or for "t" (Fig. 3).

The occluded "s" is thus not the same as the "t"; it may be defined as an "s" made with excessive tongue-pressure resulting in a sound like "t."

Treatment by having the child imitate the "s" of a normal person usually aggravates the defect; he is already making too much effort with his tongue and the more he tries the greater the effort he makes. Sometimes he can be taught directly to relax the tongue, but this rarely succeeds.

It is sometimes effective to tell the child to stick his tongue between the teeth whenever he wants to say "s"; this has the disadvantage of replacing an incorrect sound by another incorrect sound, although the new sound is nearer the correct one.

The treatment that I have introduced is to place a small stick probe over the middle of the tongue while the patient is saying "s" (Fig. 4). This produces a groove through which the air escapes with a hissing sound, and the child cannot possibly make a sound that is like a "t." Even a normal person is forced to say

Fig. 3.—Records of tongue-pressure for "s," "t" and occluded "s."

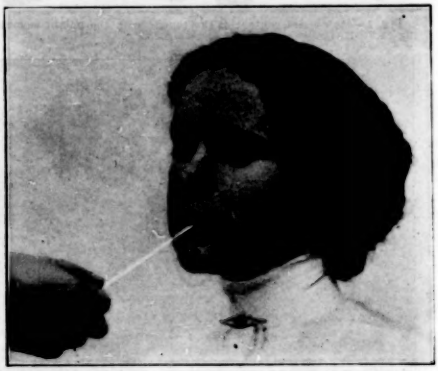

Fig. 4.—Correcting occluded "s."

"sop," "sick," "sap" when he tries to say "top," "tick," "tap." With repeated trials the new sound catches the patient's ear and he learns to replace his occluded "s" by this sound without the aid of the stick.

130 West Seventieth Street.

The Nervous Patient.—It is occasionally the practice of physicians to try to persuade nervous patients that there is really nothing the matter with them. Such a course is the gravest folly, for it has but the effect of discouraging the patient (since he is certain that there is something the matter with him), and decreasing his confidence in his physician. He feels sick, and no amount of urging can persuade him to the contrary. Functional nervous disorders are just as definite as if they were organic. The sooner the practitioner recognizes that something definite is the matter, and finds out what it is, the quicker he may effect a cure.—W. L. Cowles in the *New England Med. Month.*

THE RESULTS OF THE TREATMENT OF CANCER OF THE UTERUS BY THE ACTUAL CAUTERY, WITH A PRACTICAL METHOD FOR ITS APPLICATION *

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Any treatment of cancer of the uterus, whether by the knife or the cautery, can of necessity awaken but little enthusiasm. Until the embryologist, the pathologist and the bacteriologist widen our horizon as to the causes back of this condition, we can, by an honest exchange of experiences, hope only to prolong life, and with this add comfort to the unknown number of days that a given patient will live. No true idea of what any of our present-day methods will accomplish in the way of prolonging life in comfort, or of cure, can be known unless each surgeon who treats them at all reports his experiences in every instance, and never, under any circumstances, omits his final results in any case. The average primary mortality after the use of the knife in cancer of the cervix and uterus is probably no less than it was when abdominal and vaginal hysterectomy was first attempted. This, as we all know, is so high that it robs the subject, I repeat, of the zeal that we might otherwise have for it.

But cancer of the uterus is a real fact in our daily work. The ordinary fellow of our number sees relatively as many as the master-surgeon. The latter can do a Ries-Wertheim, the former cannot. I am sure that as far as womankind in general is concerned, it is most unfortunate that there are not a few surgeons who do no other work than hysterectomies. Assuming that the Ries-Wertheim operation is the highest expression of skill and judgment for an abdominal hysterectomy in cancer, it is to be regretted that all the cases developing in this country could not be turned over to the surgeon who would attempt no other form of operative work. But we must all agree that this, desirable as it must be from the standpoint of the afflicted, is but a surgical dream. If the knife, after all, is to remain for years yet to come, the important arbiter of the fate of the woman afflicted with this disease, then the public, I am sure, will at no distant day demand that only the man thus trained be given this work.

But, personally, I believe that the removal of the cancerous uterus by the knife is nothing less than legalized assassination. Say what we will, the primary operative mortality is absolutely unknown. It is unknown simply because it is so oppressively high; and when this is true in any operative condition, the rule is that only the exceptional recoveries and the apparent cures creep into the literature. In view, therefore, of the high primary mortality, as well as its moral and sociologic aspects, I will dismiss, for the purposes of this paper, the subject of hysterectomy from an operative standpoint, total, complete, or otherwise, as not worth the effort.

In its place, I want to offer a procedure which is based on the work of the experimental laboratory, and, in addition, an improved method of its application. As far as I can learn, the basis of the procedure is new in the details of its use, and this is also true of the method by which I limit the destructive effects of the cautery

* Read before the Western Surgical Association, Kansas City Mo., December, 1911.

outside of the pathologic area. It is not necessary for me to take up time in proclaiming the value of the actual cautery in cancerous growths, for this would be but a repetition of an important part of the medical history of the human race. Let me say here, for fear I may be misunderstood, that this method is advanced only as the best palliative treatment of cancer of the cervix and body of the uterus that is known to-day. That it may also, in certain early stages of cancer in this region, give a symptomatic cure for many years, I am convinced.

Dr. Leo Loeb, in a personal communication, stated that mouse cancer could not be successfully transplanted if the temperature of the section was previously raised 13 degrees above the human normal, Fahrenheit; while a very low degree of cold, 22 degrees below zero, seems to exert little or no retarding effect in its power to grow when a control section is transplanted into the same animal.

How much this has to do with the unquestioned benefit that the cautery exerts in some cases in retarding the growth of the ordinary forms of cancer is difficult to prove; but I believe that it is the real explanation of the benefits obtained in this class of cases by those who have made use of it. More than this, I have believed for a long time that if some rational method could be devised, by which a high degree of heat from an actual cautery could be regulated while being applied to the cervix, or body of the uterus, without destroying or even injuring portions of the vagina, bladder, rectum, intestine or ureters, this method of treatment could be made to show better results than any yet devised from the standpoint of the scalpel, not excepting the method of Ries-Wertheim in the hands of the average operator.

Before describing the method that I believe will extend the benefits of the cautery operation in uterine and cervical cancer, permit me a word of historic reference, especially as it refers to one surgeon, the late Dr. John Byrne, of Brooklyn, N. Y. In 1892, Dr. Byrne, while serving as president of the American Gynecological Association, read an address which, in its essence, referred to the relative merits of total or partial hysterectomy for cancer of the cervix by the ordinary methods of his day, and supravaginal excision by the galvanocautery. Dr. Byrne's work has been referred to in a number of articles that have appeared this year,[1] and none has questioned the very favorable reports of results by this surgeon. The four articles that I have included in the footnote are valuable because they refer not only to the abdominal and vaginal routes from the operative standpoint, but also to the use of the cautery, and, as well, the question of metastasis.

Dr. Byrne, in his address in 1892, concluded, in part, as follows:

> As operative surgery [in cancer of the uterus] is in many respects more dangerous than the disease for which it is undertaken, and as the majority of all patients afflicted with uterine cancer would live longer without than with it, it is not a safe or a useful operation, and, as such, is unjustifiable. . . . Amputation of a cancerous cervix by the cautery knife is free from danger, a safeguard against all infection, traumatic or septic, and what is of still greater importance, is destructive to latent cancer-cell proliferation in tissues far beyond the line of incision; hence, much more is comprised in the operation than the mere removal of a part, or parts, not more actively involved in the work of destruction. . . . Any method of operating, for which advantages so vital and so far-reaching can be claimed and established, and which thus distinguish it from all others, renders its adoption on the part of those who undertake to operate for cancer of the uterus no less than a moral obligation.

Unfortunately, those who extol the advantages of the cautery in cancer of the cervix and body of the uterus say nothing about its disadvantages. These, in the far advanced case, especially when the soldering-iron is used as the cautery, are both insistent and real. The difficulty is in optionally regulating the heat that is applied to the area to be treated. My experience has been that the patient inefficiently treated by the cautery is in as great danger from a rapid recurrence as is the patient treated in an unsurgical way by the knife. On the other hand, if the cancer is cauterized to the degree that is necessary in an advanced case, no method or instrument has been devised up to the present time, so far as I know, that will protect the vagina, even when not invaded by cancer, from ultimate advanced cicatrical contraction. Here, too, the possibility of a vesicovaginal or a rectovaginal fistula is not an unimportant danger. If the vagina is almost obliterated, or greatly contracted by cicatrix, because of the use of the cautery, a recauterization, which is sometimes necessary, may be out of the question. If a vesicovaginal, or a rectovaginal fistula develops as a result following the use of the cautery, one can but question what the patient has gained in the comfortable prolongation of life aimed at; certainly not very much.

The object striven for by Dr. Byrne seems to have been a high amputation of the cervix with the electric cautery — in other words, a supravaginal amputation. In the *American Journal of Obstetrics* (1892, xxvi, 578) are four beautiful illustrations which show Dr. Byrne's conception of the use of the cautery in this disease. According to these illustrations, Dr. Byrne was able to cone out a uterus and leave merely a shell, evidently by simply sensing by the hand holding the hot knife.

The greatest fear that I had in my early work was cauterizing the bladder, ureters or rectum. The ureters are particularly in danger because cancer so frequently starts in the fornix of a lateral tear, and to attack and follow it up with an unregulated, or unknown, quantity of heat, is the real problem in the use of the cautery in this region. It was this fear, on the one hand, of too much heat, and on the other, of not enough, that led to the development of the technic which I now use.

TECHNIC

1. The abdomen is prepared as for any abdominal section.

2. The patient is put in full Trendelenburg position.

3. An abdominal incision is made just sufficient to admit one or two fingers of an assistant into the pelvis; in the thin patient, one finger is enough.

4. A fever thermometer indexed to register at least 250 F. is introduced through the urethra into the bladder after the urine is removed by catheter. A second similar thermometer should be in readiness for use in the rectum, if it is found necessary to cauterize deeply posteriorly. The fingers can be used here also.

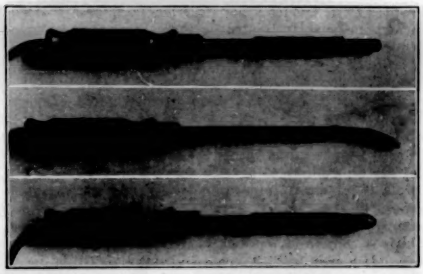
1. Findley, Palmer: Treatment of Inoperable Cancer of the Cervix, THE JOURNAL A. M. A., April 22, 1911, p. 1174. Frederick, Carlton C.: Use of the Cautery in Treatment of Carcinoma of the Cervix, THE JOURNAL A. M. A., Jan. 14, 1911, p. 94. Jacobson, J. H.: The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus, THE JOURNAL A. M. A., Jan. 14, 1911, p. 96. Sampson, John A.: The Participation of the Tissues Adjacent to the Uterus and of the Pelvic Lymphatics in Uterine Cancer, THE JOURNAL A. M. A., Jan. 14, 1911, p. 101.

5. The cautery is applied in the vagina through a Ferguson speculum, made on the plan of a vacuum bottle.

6. There is no use in attempting this work unless the cautery used is perfect in its action, i. e., has more heat under control at command, than the operator will ever require.

I believe that I have such an instrument, made for me by the Vulcan Electric Heating Company, of Buffalo, N. Y., which is shown in the accompanying illustration.

The procedures that I have outlined above, viz., the Trendelenburg position, to empty the pelvis as far as possible; the buttonhole incision, by which the assistant's finger can roughly, but for all practical purposes, determine not only the degree of heat coming into the pelvis, but the proximity of the cautery head to important structures; the thermometer in the bladder, rectum or urethra, to determine as far as possible the amount of heat that is coming into these important structures, and last, but by no means least, the use of the principle of the vacuum bottle in a speculum to preserve intact the vaginal walls, to say nothing of the vulva—this combination of procedures removes the use of the cautery in cancer of the uterus and cervix from the uncertainty and inexactness which have previously been true of it.



Cautery points used in operating on cancer of the uterus, made heavy to hold more heat. The high degree of heat transmitted to the surrounding tissues is largely responsible for the successful results of this method.

A speculum, which is made for me by Mr. Francis Storm, 63 Fulton Street, New York, promises to solve the important problem of protection of the vagina and vulva from the great heat. As a result, the after-condition of the patient is one of comfort and necessitates spending but a day or two in bed.

The use of asbestos paper in protecting the vaginal or vulva walls from the heat is decidedly of no value. The heating engineer puts around his steam-pipes asbestos of a thickness of three-fourths inch to retain heat within the pipes of 250 F. The heat developed from the cautery is in the neighborhood of 1,000 F. How much actual protection the thin sheet of asbestos paper will give when used can be understood from the above comparison. I have had no experience with the water-cooled specula, but I do not see how they can be made self-cooling without being cumbersome, expensive and much less efficient than the one here offered.

If the observation of Loeb that mouse cancer cannot be replanted successfully after raising its temperature to 113 F. plus, holds true in human cancer to the same extent, then with the procedure outlined above, we have a more efficient method than the most refined operative measure so far devised.

The tragedy of the knife in hysterectomy for cancer of the uterus is the energy of growth in the autoplanted cells, after an incomplete excision. The knife seems to stimulate mechanically the cells that it turns into a new environment, just as the thread drawn through the sluggish, although malignant, tumor of the mouse, will seemingly insult it into new potency.

The heat in the pelvis can be raised approximately to 120 F. This can be determined by the finger, or thermometer in the pelvis, as already outlined. The finger of the surgeon will rarely stand a continuous temperature over 120 F., but it takes a higher degree of heat than this to produce a burn of the first degree, so that the effect of this increased energy in the way of heat can be made to diffuse itself through the pelvis and lower abdomen far beyond the immediate contact of the cautery point. We should not forget, also, that the

TABLE OF RESULTS IN DR. PERCY'S CASES OF CANCER OF UTERUS TREATED WITH ACTUAL CAUTERY

No.	Name	Age	Parts Involved	Character of Involvement	Date of Use of Cautery	Repeated	Result
1	Mrs. W.	53	Cervix and uterus.....	Infiltrating	9/22/03	.....	Lived one year and seven months.
2	Mrs. W.	49	Cervix, vagina, uterus, broad ligaments.	Infiltrating	8/29/04	12/12/04	Lived seven months.
3	Mrs. A.	76	Cervix.....	Infiltrating	6/19/06	.....	Lived two years and two months. Died after short but unknown illness.
4	Mrs. D.	55	Cervix.....	Vegetative.	9/25/06	.....	
5	Mrs. F.	45	Cervix.....	Enormous vegetative	9/21/08	.....	Still living and well, three years and three months after single use of cautery.
6	Mrs. S.	49	Cervix, vagina, uterus, broad ligaments.	Infiltrating	11/7/08	12/18/08	Lived one year and eight months.
7	Mrs. C.	58	Cervix.....	Infiltrating	12/18/08	3/22/09	Extensive involvement of vagina and right broad ligament. Lived eight months.
8	Mrs. H.	57	Cervix and post. vaginal wall.	Infiltrating	2/18/09	.....	Died uremic, twenty days after treatment.
9	Mrs. N.	57	Cervix, vagina, right broad ligament.	Infiltrating	11/4/08	3/2/09	Vesicovaginal fistula. Lived eight months after first cauterization. Vesicovaginal fistula followed second cauterization.
10	Mrs. C.	48	Cervix and body of uterus.	Infiltrating	3/10/10	.....	Lived forty days.
11	Mrs. H.	46	Cervix, vagina and uterus.	Infiltrating	3/21/10	.....	Lived three months.
12	Mrs. S.	50	Vagina, cervix, uterus, pelvis.	Infiltrating	4/3/11	4/3/11 4/22/11 6/19/11	Lived in comparative comfort for six months. Practically no morphin until last few days and offensive discharge greatly reduced.
13	Mrs. H.	42	Cervix.....	Vegetative.	5/1/11	10/9/11 Vaginal hysterect.	Hysterectomy was done because of signs of recurrence in post. part of cervix. This case should have been amputated supravag., with cautery primarily.

tissues to which the cautery heat is applied are wet, and that some of the diffusion of heat must be in the form of steam. Because of the wet tissues, the temperature rises slowly in the pelvis.

In closing, I want to advise strongly against the use of the curet as a preliminary to cauterizing, or operating the cervix or uterus, when malignant. Those of us who have studied cancer in serial section have witnessed portions where eroded lymph- and blood-vessels were penetrated by the aberrant cells, to be carried by these currents to distant parts of the body. The sections that I obtain for microscopic study of cancer in the living subject are neither cut nor scraped; they are burned off with the cautery knife.

Heretofore, I have not tried to do a supravaginal amputation with the cautery, as advised by Dr. Byrne, because under former methods it was impossible to tell how close the cautery point was to the serous surface of the uterus. Under the technic above outlined, the Byrne operation is feasible. For the purposes of clinical work, I have divided this disease into two classes; the one involving the cervix, and, with it, often the vaginal walls, including the urethra; the other recognizes the uterus as the principal factor, and when present, the secondary involvement of the broad ligaments and adjacent pelvic tissues. The main object of the treatment is to raise the temperature in the outlying tissues to a point which will prove inimical to the further development of the cancer cells, while destroying the gross pathology with the fire at the cautery point. It is for this reason that I have had these points made so heavy, in order to carry a maximum of heat. A small point will cut, when hot; but not heat to the degree required. When the anterior wall of the vagina is involved, I put the thermometer in the urethra, and make it register a temperature of 115 to 120 F., by the smallest cautery point in proximity to the anterior vaginal wall. It is quite surprising to note the amount of heat that the pelvic tissues will tolerate without giving way. The explanation must be that when the process of repair is inaugurated, the heat-destroyed tissues act as a scaffolding on which the new normal repair cells bridge their way.

The method outlined above should precede all operations, even where the knife is chosen as the justifiable means to be used for the removal of the cancerous cervix or uterus. In the after-treatment, no packing is used in the vagina.

As to results, unfortunately, not all of my patients with uterine cancer have been treated by the methods here outlined. In common with others, I have used the knife more than the cautery, and, as a result, in no advanced cases have the patients lived long enough after operation to make statistics valuable enough to quote. With the cautery, thirteen patients have been treated, the first operation being done Sept. 22, 1903. Of these patients, I have one living (Case 5), three years and three months after the use of the cautery. The base of the cervix, in this case, was over 3 inches in diameter, and the cauliflower-like growth filled the entire vaginal space, ballooning it to a considerable degree. In addition, the woman was almost exsanguinated, and with this, a hemoglobin percentage of 30. Another patient (Case 3) lived two years and two months after the use of the cautery, and died after a short but unknown illness. In this woman, the cervix only seemed to be involved. Patient 1 lived one year and seven months; Patient 6 lived one year and eight months; Patient 7, eight months. It must be remembered that these patients were submitted to the cautery because, from a clinical standpoint, they were considered otherwise inoperable. If all cases of cancer in the region of the body under consideration were submitted to the improved cautery operation here described, I am more than convinced that we would obtain not only the advantage of no primary mortality, but, in addition, a largely increased percentage of lives greatly prolonged in comfort, with freedom from hemorrhage, exhausting and offensive discharge, and mental distress. More than this, an appreciable number of symptomatic cures extending over a period of years would result.

RADIOGRAPHS IN THE DIAGNOSIS OF GASTRO-INTESTINAL ADHESIONS AND ULCERS *

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I. ADHESIONS OBSTRUCTING TRANSVERSE COLON

CASE 1.—*Patient.*—Mrs. McM., aged 41, a patient of Dr. Gonzales, was referred to Dr. Robert Coleman Kemp, the gastro-enterologist, and Dr. Parker Syms, the surgeon, with a history of having an amputation of the cervix eighteen years ago, hysterectomy thirteen years ago and an operation for adhesions and removal of the appendix seven years ago. Subsequent to the last operation she had suffered from constipation and prolapsus ani to such an extent as to suggest a kink in the sigmoid or an invagination into the rectum.

Radiograph.—I was asked to make a radiograph to determine the nature and seat of the obstruction. The stomach and intestines were empty and an enema was given which filled the rectum and large intestine with an opaque emulsion of bismuth oxychlorid and bolus alba.

℞	Bismuth oxychlorid	oz ii
	Bolus alba	lb ss
	Water to make	O ii
M. Sig.		

This is sufficient for one injection per rectum.

Diagnosis.—The radiograph showed no abnormality except a strikingly empty part of the transverse colon where the latter crossed the spine. This meant that a certain portion of the transverse colon was permeable but subject to such pressure as not to be distended with the bismuth mixture. It did not seem probable that this pressure could be due to a tumor without the latter giving other signs. Another possibility to be considered was that the pressure was due to the convexity of the spine, but no compression was applied over the abdomen and no such appearance had been noted in other cases. The diagnosis became narrowed down to pressure by a band of adhesions.

Operative Findings.—Dr. Syms performed a laparotomy so as to expose this portion of the intestine instead of the lowest part as had been anticipated. He found an area of the omentum, 3 inches wide, bound down and firmly adherent to the transverse colon for about two-thirds of the circumference of the intestine. This caused both compression and angulation which were relieved by separating the adhesions. The patient made a good recovery and is now having movements without a cathartic.

Dr. Kemp wishes me to emphasize the fact that no symptoms pointed to the transverse colon as the seat of obstruction, and that this part was not under suspicion and would not have been operated on except for the revelation made by the radiograph.

* Read before the Surgical Section of the New York Academy of Medicine, Dec. 5, 1911.

II. GASTRIC ULCER

CASE 2.—Mr. S. was referred by Dr. Kemp, with gastrosuccorrhea as the principal symptom. The stomach was always found full of gastric juice. The radiograph showed that the bismuth meal passed through the stomach and small intestine in a normal manner but that a splotch of bismuth remained adherent after the rest of the stomach was empty. This indicated an ulcerated area near the esophagus which had not secreted enough pus to show in the stomach analyses, yet still was a constant source of irritation. This had been accompanied by sick headaches which had been only temporarily relieved by an operation on the gall-bladder and by fasting and catharsis. The stomach would frequently fill up with bile. Acting on this diagnosis the patient has been put on a bismuth treatment for gastric ulcer and Dr. Kemp reports the greatest improvement.

III. PERFORATED GASTRIC AND DUODENAL ULCERS WITH ADHESIONS OBSTRUCTING PYLORUS

CASE 3.—Patient.—Another man, Mr. B., aged 58, was also referred to me by Dr. Kemp. The patient had had a weak stomach all his life, getting worse two or three years ago and losing 25 pounds. Food was found in the stomach seven to eighteen hours after eating.

Radiographic Diagnosis.—After fasting and purgation, a bismuth meal was given consisting of 1 ounce bismuth oxychlorid, a dish of mashed potatoes and a glass and a half of water. A fluoroscopic examination, with the patient standing up, showed the bismuth meal as a shapeless mass a hand's breadth below the umbilicus. Radiographs, made twenty minutes and six hours respectively after ingestion showed the stomach vertical and confined to the left side of the median line and extending below the level of the umbilicus. The second radiograph showed most of the bismuth still in the stomach, none in the duodenum but some in the ileum. The radiographic diagnosis was pyloric obstructions, possibly cancerous.

Operative Findings.—An exploratory operation seemed to be urgently required. Dr. Kemp reported that there were two or three old ulcers of the stomach and duodenum, all of which had perforated. Leakage was prevented by adhesions to omentum and pancreas but these adhesions had dragged the stomach down and obstructed the pylorus. The operation of separating these adhesions was a severe one and the patient died.

140 West Fifty-Seventh Street.

RELATIVE FREQUENCY OF AORTIC INSUFFICIENCY *

J. E. GREIWE, M.D., CINCINNATI

The idea so long held and so frequently quoted by text-books, that mitral disease is by far the most frequent of the valvular lesions of the heart, must, in my opinion, be modified. From my own experience in private practice as well as from extensive hospital material, I believe that aortic lesions are as frequent as, or more frequent than, lesions at the mitral orifice.

The total number of heart lesions on the South Medical Service of the Cincinnati Hospital on Dec. 21, 1911, numbered fifteen cases, classified as follows:

Mitral lesions, 3; aortic lesions, 5; aneurysms of aorta, 2; combined mitral and aortic lesions, 4; pericarditis, 1.

From past experience with the material in the Cincinnati Hospital, this does not differ greatly from the usual run of heart lesions seen on this service.

From the records of this hospital it is found that for the four years, 1900 to 1903, inclusive, there were 854 necropsies reported. Of these 854 patients, 160 had had well-defined heart lesions. No mention was made of the character of the myocardial changes found in the various diseases, but the rather impressive fact was again established that aortic disease and mitral disease were equally well represented, and, in fact, with a slight margin in favor of the greater frequency of aortic lesions. There were recorded as follows:

Aortic lesions, 43; mitral lesions, 43; combined aortic and mitral lesions, 38; pericarditis, 16.

Of these sixteen cases of pericarditis, ten were well-marked cases of adhesive pericarditis. Here, again, is a point of extreme interest from the pathologic as well as from the clinical standpoint, viz.: of these ten cases of chronic adherent pericardium there was found an involvement of the aortic valves in five instances and disease of the mitral area in two. In two cases in which the tricuspid valves were organically diseased there was also disease of both aortic and mitral valves.

Of the forty-three cases of aortic disease, nine showed functional insufficiency at the mitral orifice.

Admitting that the infection as seen in acute articular rheumatism more frequently affects the mitral area, the fact remains that the severest types of the so-called ulcerative endocarditis do greatest damage to the aortic area. Considering syphilis, gout, lead-poisoning, hard manual labor, sudden and severe strains, arterial degeneration and chronic nephritis, or their causes, as etiologic factors in the production of valve lesions, it must be admitted that these, individually and collectively, predispose more to alterations about the aortic area than to alterations about the mitral area.

There is a large class of cases which one sees in private practice in which arteriosclerosis occurs comparatively early in life. My experience has been that such cases have a tendency to mitralize—if one may use such an expression. By that I mean that, sooner or later, changes about the mitral valve will become evident, and not infrequently we notice both stenosis and regurgitation at the mitral orifice. The necropsies in such cases reveal the fact that the chordæ tendineæ, the tips of the papillary muscles and the myocardium have also been involved in the extension of the sclerotic process. On the other hand, because of the tremendous increase in arterial tension and because of the increase in strain and tension at the aortic orifice, we find degenerations of the lower part of the aorta, the aortic ring and the aortic valves. Syphilis as an etiologic factor in the causation of heart lesions, and more particularly as the cause of aortic lesions has long been an acknowledged and well-established agent, and although Wharton has demonstrated the relation between the specific organism of syphilis and myocardial changes, nevertheless the lower part of the aorta, the aortic ring, the openings of the coronary arteries and the aortic valves are favorite sites for the manifestation of cardiac syphilis.

With the addition of salvarsan to our remedies in attacking early syphilis, we may hope to turn the tide of the frequency of the valve lesions back to the old belief, but for the present, we must modify our statements concerning the relative frequency of valve lesions.

32 Garfield Place.

* Read before the Clinical Society of the Cincinnati Hospital, Dec. 21, 1911. Four cases of aortic insufficiency were presented at this time, one occurring in a boy of 12 after an attack of acute articular rheumatism and the other three being due to syphilitic infection.

Plague and the Tarbagan.—Plague is known to be endemic in several regions in Siberia and Mongolia. From remote times, the tarbagan, a marmot common in these regions, has been observed to suffer from a fatal epizootic, beginning in the autumn before the hibernating season. The symptoms of this disease suggest plague. The tarbagan is hunted in the late autumn for its fur. Plague is reported to break out among hunters of tarbagans, especially among imported coolies, who, unlike the natives, are unable to detect sick animals. Tarbagans are reported to be susceptible to inoculations with the *Bacillus pestis*, and fleas have been found on them. A priori, from the rôle played by ground squirrels and their fleas in the transmission of plague, the hypothesis that a similar rôle is performed by the tarbagan is presented. This has, however, only the value of an hypothesis since bacteriologic and pathologic proofs are as yet lacking.—Preble in *Public Health Reports*.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

CORNUTOL—Liquid-Extractum Ergotæ, Mulford.—Cornutol is a biologically tested liquid extract of ergot, containing the water soluble, alcohol insoluble, constituents of ergot and about 10 per cent. alcohol.

Cornutol is made by removing fat from ergot with petroleum benzine, percolating the fat-free drug with water, purifying with strong alcohol and concentrating in vacuo; 2½ parts of drug are employed in the manufacture of 1 part of cornutol.

It is a brownish-red liquid, having a characteristic not unpleasant odor and disagreeable taste.

When 0.04 Cc. cornutol per kilo weight of animal is injected intravenously into dogs, a rise in blood-pressure of not less than 12 mm. is produced.

Actions and Uses.—Cornutol has the actions and uses of ergot.

Dosage.—Hypodermically, 0.65 to 2 Cc. (10 to 30 minims); by the mouth 0.65 to 4 Cc. (10 to 60 minims) repeated as may be necessary. On account of the deterioration that is liable to occur in this preparation, the date when it was tested appears on each package.

Manufactured by H. K. Mulford Co., Philadelphia. No U. S. patent. U. S. trademark No. 50,043.

Ampuls Cornutol.—Each contains cornutol 2 Cc. (30 minims).

DIGITOL.—Fat-Free Tincture of Digitalis, Mulford.—Digitol is a biologically and chemically standardized, fat-free tincture of digitalis, corresponding in drug strength to tincture of digitalis, U. S. P., and containing not more than 70 per cent. alcohol.

Digitalis which has previously been subjected to percolation with petroleum benzine is extracted by percolation with the hydroalcoholic menstruum in the usual way.

It is a brownish-green liquid having a characteristic and highly alcoholic odor and a bitter taste.

It is standardized to contain not less than 0.025 Gm. digitoxin in 100 Cc. and to such a strength that the minimum lethal dose for a 250 Gm. guinea-pig is approximately 1 Cc. Digitoxin may be determined by the method described by Reed and Vanderkleed (*American Journal of Pharmacy*, March, 1906). The minimum lethal dose on normal (250 Gm.) guinea-pigs is also determined and the preparation adjusted so that 1 Cc. is the minimum lethal dose.

Actions and Uses.—The same as Digitalis.

Dosage.—0.3 to 1 Cc. (5 to 15 minims). On account of the deterioration that is liable to occur in this preparation, the date when it was tested appears on each package.

Manufactured by H. K. Mulford Co., Philadelphia. No U. S. patent or trademark.

Therapeutics

TREATMENT OF ACUTE ARTICULAR RHEUMATISM

It is interesting to compare the 1911 edition of a text-book, like Anders' "Practice of Medicine," with an old edition, that of 1899, for instance. Twelve years of experience have only confirmed the treatment of acute articular rheumatism advocated then, but a few details have been added, such as, for example, in referring to the cardiac manifestations: "Unless combined with the symptoms outlined above [increase in the febrile movement, more or less palpitation, sometimes dyspnea, precordial pains which often do not amount to more than a sense of soreness, with possibly attacks of angina pectoris of apparently purely nervous origin] the presence of a blowing systolic murmur does not afford trustworthy evidence of the existence of acute endocarditis. I have witnessed two instances in which endocarditis preceded the arthritic manifestations. Church and Cheadle state that in a large majority of cases, if no endocardial murmur is present during the first ten days of an attack the endocardium escapes."

Anders adds in reference to the subcutaneous rheumatic nodules: "Riess believes them to be of embolic origin." And further, "Cheadle considers that the eruption of large nodules signifies persistent and uncontrolable cardiac disease." He adds to the usual eight groups of symptoms a ninth, namely, "Inflammation of the parotid gland—rheumatic parotitis—which was met with in three cases by Courtois-Suffit and Beaufume." He says of the clinical peculiarities of the disease in children, "The febrile movement is brief and hyperpyrexia less frequent than in the adult. The nervous features are more marked, notably chorea." Bareno reports a case in a new-born infant. In diagnosis he adds: "The acute development as a primary affection of polyarthritis with fever, *early tonsillitis, sudden anemia, moderate leukocytosis and fresh cardiac murmurs*, is a symptom-complex on which an assured diagnosis can be based."

In differential diagnosis, he adds a sixth affection—"glanders, which at the onset may be mistaken for rheumatism." In treatment, he repeats his former directions as to diet and stimulants, "milk being the best food-article, with buttermilk or egg-white if milk cannot be taken in adequate amount, returning to the earlier liquid or soft diet on return of pain or fever." He adds: "The prompt treatment of tonsillitis among children and young adults is important prophylactically." "The bowels should be opened early with calomel, followed by salines." He says of ammonium salicylate that his experience with it, although limited, has been satisfactory. His method with sodium or ammonium salicylate is to give grains x (0.6 gm.) every two hours the first day, or until the pain and other local features have largely disappeared; then the remedy is given at longer intervals, but not omitted entirely.

He says of antipyrin that he has "come to believe that safer and equally efficacious remedies have replaced this drug. Potassium iodid and the preparations of colchicum belong to this category and should be tried. Their effects are most beneficial in cases that drag on after the acute stage is over. Good results have been reported from the use of acetyl salicylic acid (aspirin) (grains vij-xv or 0.50-1.00 gm. thrice daily) in both acute and chronic rheumatism. Stengel has noted improvement from the use of antistreptococcic serum in three cases of protracted recurring rheumatism. Menzer has successfully treated a number of cases with a serum made from streptococci of human origin. It is also indicated in cases showing a pyemic temperature (Chipman)." Among old local measures Anders advocates perfect rest for the affected joints, padded splints, a roller bandage or plaster casts. For hyperpyrexia he advises cold "affusions." In conclusion he states "Gürich succeeded in curing ninety-eight out of 125 patients with articular rheumatism by tonsillectomy." See further, the abstracts on pages 443 and 444 of THE JOURNAL, Feb. 10, 1912.

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SATURDAY, MARCH 9, 1912

THE PHYSIOLOGIC PROPERTIES OF EXPIRED AIR

The problems of ventilation are perennial in their interest. The pendulum of hypothesis in regard to the assumed toxic properties of the atmosphere of restricted spaces has swung from one extreme to another. At the present time there is a consensus of opinion that, aside from obvious extreme alterations of the inspired air, lack of oxygen or increased concentration of carbon dioxid does not play any significant rôle in the familiar malaise of "poor ventilation." We have lately referred to the growing tendency to charge the ill effects of vitiated air to increased temperature and humidity, factors which unquestionably exert a most depressing influence under the given conditions.[1]

Whether there are any more specific "poisons" in the expired breath cannot be so easily answered. The succession of attempts to demonstrate the existence of some harmful compound or to isolate an organic toxin has led to the most contradictory results. Two familiar methods of investigation have been employed; one, to compel an animal to breathe the expired breath of another animal; the other, to inject the condensation products of the air we breathe, in order to obtain evidence of toxic products.[2] Flügge and his pupils have demonstrated, however, that in coughing, speaking, or forced respiration of various types minute particles, including bacteria, may be sprayed into the surrounding atmosphere—a form of dangerous contamination which the refined practice of the modern surgeon seeks to avoid during operative procedures.

In the editorial[1] previously referred to, we mentioned the search for further evidence of the presence of organic matter in the expired breath by Rosenau and Amoss.[3] Their method consisted briefly "in condensing the vapors from the expired breath of man, injecting the liquid so obtained into guinea-pigs and, after an interval of several weeks or more, testing the guinea-pigs to determine whether they have become 'hypersusceptible' to normal human blood." With this delicate and specific anaphylaxis test positive reactions were obtained in a sufficient number of cases to warrant a further prosecution of this research. Professor Rosenau's unusual experience with anaphylaxis methods and problems lends a degree of assurance to this striking report which might not apply to a less adept observer. As is often the case in science, the facts cited bring with them a host of new questions regarding the real significance of the findings and the source of the sensitizing substance. Does it pass into the air with watery vapor, and how? Is the phenomenon concerned in the normal susceptibility of certain people?

In our earlier reference to this work some critique of the results was offered. There has been a tendency in some quarters to attach a significance and suggested application to these preliminary findings which they scarcely warrant as yet. As Rosenau and Amoss remark, the fact that organic matter is present in the air expired does not mean that these exhaled substances are poisonous. They report that the injection of the condensed liquid caused no other untoward symptoms in the animals. Weichardt,[4] however, has claimed to obtain exhibitions of toxicity from the condensation water of expired air obtained under very special conditions. The results are not entirely convincing and have been subjected to adverse criticism.[5]

The final word in respect to this important matter cannot yet be spoken. Meanwhile the subject is being studied from new points of view which are certain to broaden the horizon of the hygienist.

1. Editorial, The Journal A. M. A., Sept. 16, 1911, p. 980.
2. Billings, Mitchell and Bergey: The Composition of Expired Air and its Effect on Animal Life, Smithsonian Institution Publications, 1895.
3. Rosenau and Amoss: Organic Matter in the Expired Breath, Jour. Med. Research, 1911, xxv, 35.
4. Weichardt: Ueber Eiweissspaltprodukte in der Ausatemluft, Arch. f. Hyg., 1911, lxxiv, 185.
5. Inaba: Ztschr. f. Hyg., 1911, lxviii, 1.

CAN PROTEINS BE ABSORBED WITHOUT PRELIMINARY DIGESTION?

At various times we have emphasized the current doctrine regarding the complete digestive disintegration of proteins prior to their absorption from the alimentary tract. The advances in the chemistry of digestion have more and more indicated that profound cleavage is a fundamental necessity for the normal utilization of the food intake.[1] The efficiency of the intestinal lining in preventing ordinarily the entrance of undigested protein has been compared to the normal resistance of the kidney epithelium to the egress of blood protein into the urine. The question may therefore well be raised whether a foreign protein can be absorbed unchanged through the intact alimentary epithelium.

The difficulty of detecting traces of a foreign protein beyond the intestinal wall has at length been overcome by the application of the anaphylaxis test, a method whereby a twenty-millionth part of a gram of protein may suffice, according to H. Gideon Wells, to sensitize a guinea-pig. Using this procedure, several American investigators have offered reports of the passage of egg-

1. Body Cells and Food Substances, The Journal A. M. A., Feb. 24, 1912, p. 556.

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white into the circulation in a form still detectable by the anaphylactic response, i. e., in a form still *protein* in character. In their pioneer experiments on anaphylaxis, Rosenau and Anderson showed that animals fed with foreign protein might become sensitive to this protein, an observation since repeatedly confirmed, showing that at least a trace of the protein must pass from the intestine into the blood in practically unaltered condition.

Vaughan, Cummings and McGlumphy[2] have succeeded in sensitizing animals to egg-white with the blood removed from rabbits after introduction of this protein into both the stomach and the large intestine. More interesting are the experiments by Van Alstyne and Grant,[3] who placed egg-albumin in isolated loops of intestine in dogs carrying the well-known Thiry-Vella fistula. Here the ordinary opportunity for digestive alteration is largely excluded. They found that the protein was rapidly absorbed and was then present as such in the circulating blood. In cases of alimentary albuminuria they were likewise able to identify the food protein in the urine by the anaphylaxis method; but not all of the protein appearing in the urine under these conditions is foreign albumin.

Before placing too great emphasis on the practical bearing of such observations the extreme delicacy of the method employed must be borne in mind. It remains to be learned whether, indeed, these facts represent a normal process at all, and if not, what are the pathologic factors concerned. It is of interest to add that these investigations also attest the speedy subsequent disappearance of the foreign protein from the circulation.

MUSCULAR DEVELOPMENT AND PHYSICAL EXERCISE

Dr. Friedman, whose article on this subject appears in this issue, discusses a topic which is worthy of more attention by practicing physicians. On the shoulders of the general practitioner rests a large part of the responsibility of educating the public to the need of systematic methods for securing proper physical development. The conditions which make this need imperative have developed largely within the last half-century and are without remedy in themselves; to reverse them would be to return to the age of the spinning-wheel and the flint-lock. Modern labor-saving machinery and industrial progress are responsible for the conditions under which many men live by mental activity, while many others, though engaged in physical toil, employ but a few muscles of their bodies, and use those under the racking nervous strain imposed by the necessity of keeping pace with machinery.

The general trend of Friedman's arguments cannot but receive hearty endorsement, notwithstanding the fact that he makes occasional statements to which exception might be taken. For example, the statement that the Jews suffer little from congenital physical defects seems to conflict with the marked prevalence of hernia, flat-foot, refractive errors, myopia, etc., among the Jews. Also, if the Jews "gained an immunity to tuberculosis by living for centuries in crowded and insanitary ghettos," it is difficult to understand why tuberculosis should be so very common among them in this country under hygienic conditions certainly not much worse than those which produced the alleged immunity. Again, not all neurologists would agree with Friedman's statement that "neurasthenia is the most common result of a poor muscular system being overstimulated by a too active brain." Some authors reverse the sequence and speak of the enfeebled muscular condition in neurasthenia as a result of enfeebled nervous stimulation.

In his emphasis on the need for physical education, Friedman is in line with the foremost educators of the day. That there is need for reform in our system or lack of system of physical training, there can be no question. Physical training, conducted as it is in our schools and colleges, as well as in our athletic clubs, on a competitive basis, is not fulfilling its true mission. The individuals are placed, or place themselves, in the class of exercises at which they excel rather than in the class in which they are deficient. The purpose of this misdirection is to develop a few athletes who can win honors or establish records rather than to make the average man or woman a physically well-rounded and well-balanced individual by correction of weaknesses and development of deficient groups of muscles. Even the athlete is a physical machine geared to accomplish record feats rather than to be generally efficient and durable. The evil effects of this one-sided type of training in the athlete were commented on recently in these columns.[1] Figures from the report of the Surgeon-General of the United States Army show that the men who were especially fine athletes during their training course at Annapolis Naval Academy are especially subject to disabilities in their subsequent careers or to premature death. The evil effects of the complementary neglect of the non-athlete are only too generally apparent in the flabby muscles and generally undeveloped physical organization of the average student.

When physical training is reorganized on a more rational basis, it is to be hoped that from the time the child enters school the body as well as the mind of each student will be developed by exercises suited to its capacity, and that physical training will be so planned that each individual will receive training, not so much in the line of his proficiency as in that of his deficiencies. The purpose should not be specialization, but well-rounded development; not a few athletes with future usefulness impaired by overtraining or overstraining on the field of contest, but a race of men with physiques abounding in endurance, energy and resilience.

2. Vaughan, Cummings and McGlumphy: Parenteral Introduction of Proteins, Ztschr. f. Immunitätsforsch. u. exper. Therap., 1911, ix, 1.
3. Van Alstyne and Grant: The Absorption of Albumin Without Digestion, Jour. Med. Research, 1911, xxv, 399.

1. THE JOURNAL A. M. A., Jan. 6, 1912, p. 40.

HEALTH CONDITIONS IN ALASKA

In striking contrast to the prompt and efficient medical interest displayed by the United States in the Philippines, Hawaii, Panama, Cuba and Porto Rico, has been the attitude of the government toward health affairs among the natives of the District of Alaska. Here is a territory approximating in area one-fifth of the United States and bounded by many thousands of miles of seacoast. The native population of twenty-five thousand is scattered through this vast expanse in villages averaging from thirty to three hundred inhabitants each.

At the request of the Secretary of the Interior, a medical officer was detailed from the Public Health and Marine-Hospital Service to investigate sanitary conditions and health problems in Alaska. The report of Dr. M. H. Foster,[1] who was assigned to this duty, was sent to the House of Representatives on Jan. 23, 1912. Dr. Foster traveled extensively through Alaska and improved every opportunity of obtaining information from teachers, missionaries, physicians and government officials, as well as by direct investigation of the natives and their surroundings.

From the sanitary standpoint the worst conditions were those associated with overcrowding in small, poorly ventilated houses, and with a very imperfect water-supply. Overcrowded living quarters are largely responsible for the wide dissemination of tuberculosis. With the present inadequate water-supply in most of the villages, it is useless to preach personal or household cleanliness to the natives. Above the arctic circle, it is no uncommon thing to find urine used for personal ablutions, and decomposed urine used for washing clothes, because of the ammonia contained as well as because of the lack of a good water-supply.

The habits and character of the natives are such as to foster unhygienic conditions. Laziness, carelessness and indifference are the rule. Were it not for the healthful climate and outdoor occupations, such as fishing and salmon-canning, the results would be far worse on the general health. Alcohol has its usual evil influence on an uncivilized people. Infant mortality is very high, partly because of the lack of cow's milk; only condensed milk is available.

The three diseases of most threatening aspect are tuberculosis, trachoma and syphilis. Many of the Indians present an unusual resistance to tuberculosis, and this Foster attributes to the very high fat content of their diet, which contains large quantities of fish oil. In 1,364 Indians examined, about 4 per cent. suffered from tuberculosis, most of which was of the pulmonary type. Over 7 per cent. of those examined suffered from trachoma, and nearly 3 per cent. were blind, largely as a result of trachoma. Syphilis was found in 1.5 per cent. Blind natives lead a pitiable life, having no employment and little sympathy from their fellows.

Foster makes three recommendations: (1) the establishment of a sanatorium for cases of pulmonary tuberculosis requiring hospital care; (2) the establishment of a home with suitable employment for destitute blind and crippled natives; (3) authority for a public health service officer to act as commissioner of public health for Alaska. In addition he urges extension of the medical work in connection with the Alaskan school service.

Considerations of justice and humanity urge that these recommendations be followed.

1. Foster, M. H.: Relief of Indians and Other Natives of Alaska, contained in House Document 477, 62d Cong., 2d Session.

PRACTICAL TYPHOID PREVENTION

Recently[1] we called attention to the suppression of epidemic typhoid fever in Yakima County, Washington, and the possibilities of similar practical work if applied throughout the country. A few further deductions may be made from the results of that campaign.

Among the important lessons of the work in Yakima County are, first, that typhoid fever in the average community in the United States can be practically eliminated by carrying out reasonable and comparatively inexpensive measures; second, that the community itself must bear the greatest part of the burden, and that in this the first requisite is the appointment of an expert, full-time health officer at an adequate salary (a salary of five thousand dollars per annum was provided for the health officer of Yakima County); third, that the expert assistance and advice of the national public health bureau are almost invaluable in organizing local health work. Were Congress to make it possible for this bureau to put even as many as one hundred men into the field for typhoid work, and were they to succeed in securing the cooperation of the local authorities as did Lumsden at Yakima, the increased expenditure would be insignificant in comparison with the resulting saving of health, life and economic resources.

It is gratifying to be able to record for the same year in the United States two notable achievements in sanitation as regards typhoid: the one, in the spring, in the Army encampment on the Mexican border, when, under military discipline, the maintenance of excellent hygienic conditions, together with antityphoid vaccination, kept some 12,000 troops practically free from typhoid fever; the other, in the summer and fall, in North Yakima, where, under civil administration and through awakening of intelligent public sentiment, measures were carried out which eradicated 87 per cent. of the typhoid fever of a community of about 45,000 persons.

Emphasis should be placed on the fact that the work in Yakima County, like that of the eradication of plague in San Francisco and of yellow fever in New Orleans, was carried out in the absence of the military control which facilitated the marvelous work of the United States in Cuba and Panama — a fact which brings the work and its lessons very near home.

1. A Triumph of Sanitation, THE JOURNAL A. M. A., March 2, 1912, p. 639

Current Comment

MILK-FAT, TISSUE-FAT, AND FOOD-FAT

We recently referred[1] to the unique series of nutrition experiments conducted on cattle at the Wisconsin Agricultural Experiment Station.[2] The animals were kept over long periods—four years—on foods derived from a single plant: wheat, corn, oats, or a mixture of these. This afforded an unusual opportunity for making a study of the influence of qualitatively unlike rations on the composition of the milk and the tissues under comparable conditions of environment. It will be observed that here is the old question of "breed versus feed." The problem at issue is not a new one, and the question of the influence of diet on milk secretion has a peculiar interest to the physician in pediatric practice. It cannot be denied that foreign substances, such as certain drugs, may readily pass into the milk. That a surfeit of foreign fats will undoubtedly influence to some extent the character of the fats secreted in the milk is beyond question. But in most respects—and this is supported by the Wisconsin investigations referred to—"the character of the fats secreted is influenced more by individual metabolism than by the character of the food intake. This is particularly true when the fat content of the intake is not excessive and the content only that incident to normal feeding materials." In harmony, moreover, with the finding that the widely divergent rations had little direct or positive influence on the chemical constitution of the fats secreted in the milk were the facts noted in connection with the tissues examined. The variations that did occur were more of an individual nature. There is growing belief in the strong tendency of the organism to maintain a constancy of ultimate chemical structure independent of variations in the nature of the proteins ingested. Similarly the fatty tissues exhibit a proneness to uniform and constant composition even when the character of the fat in the diet is entirely different from that normally deposited. Judging by the Wisconsin studies, in connection with many others, the oils in corn, oats or wheat are so markedly different from those stored in the tissues of animals fed exclusively on these grains that very important synthetic processes must have been active in their deposition. Fat transportation cannot account for all; transformation must play an added rôle.

1. Unappreciated Factors in Diet, THE JOURNAL A. M. A., March 2, 1912, p. 637.
2. Hart, McCollum, Steenbock and Humphrey: Physiologic Effect on Growth and Reproduction of Rations Balanced from Restricted Sources, Univ. Wisc. Agric. Exper. Sta., Research Bull. 17, June, 1911.

HEALTH QUESTIONS AND POLITICS

An interesting phase of the education of the public in health matters is the attitude of the newspapers, which are constantly giving more and more intelligent discussion to health questions. A hopeful feature of this discussion is the tendency to demand of public officials, local, state and national, support of public health movements. In a recent editorial in a Chicago newspaper concerning aldermanic primaries, the attitude of prospective aldermen concerning health matters is placed first in the discussion of the qualifications of an alderman. It is said: "A bad alderman may do you more harm than a bad president: if your child dies because he has blocked a milk ordinance; if your family sickens in an epidemic which an inadequate health inspection has made possible; if you wear your life out with bad transportation, bad air, bad housing. . . ." This is followed by a discussion of the business and other qualifications of candidates, etc. It has, of course, always been true that the health of the people should demand first consideration and that health measures should receive adequate support; but health and health measures have never received such consideration and support, and politically regarded, the health of the people has always occupied a subordinate place. It is therefore significant and encouraging to find these matters mentioned as of first importance in the qualifications of candidates for office.

THE RELIABILITY OF DIGITALIS AND ERGOT PREPARATIONS

Manufacturing pharmaceutical houses for years have claimed that their preparations of digitalis, ergot, strophanthus and other drugs whose quality could not be determined by chemical means were carefully standardized by biologic methods. As a natural corollary, these firms asserted that their respective preparations were most uniform and trustworthy. Then appeared the reports of the investigations by Hale[1] on the standardization of digitalis and of Edmunds and Hale[2] on the testing of ergot. These authors concluded that although there were methods available whereby the activity of digitalis and of ergot could be determined, the proprietary preparations for which reliability and permanence were claimed, in reality were not only unreliable, but also, in some cases, practically worthless. It was suggested that as the methods for such standardization were not simple the manufacturers had not used the care and skill in making the product which the advertising claims would lead one to expect. In fact, it almost looked as if the biologic assays of this class of preparations had been largely a matter of printers' ink. The criticisms that have been made of the various preparations investigated are serious ones and are of vital importance not only to scientific medicine, but, which is of more moment, to the public. Most of the manufacturers whose products were thus proved either unreliable or practically worthless, have apparently made no effort to correct the evils whose existence has been demonstrated to exist. In justice it must be said, however, that one firm took the reports seriously and proceeded to put its house in order. The H. K. Mulford Company first published an acknowledgment that its products were not permanent and promised that in future it would date its packages so that physicians might know the exact age of each preparation. As a next step,

1. Hale, Worth: Hyg. Lab. Bull 74. Referred to editorially in THE JOURNAL A. M. A., April 22, 1911, p. 1198.
2. Edmunds, C. W., and Hale, Worth: The Physiologic Standardization of Ergot, Hyg. Lab. Bull. 76. This report was also given, in part, in THE JOURNAL A. M. A., Oct. 14, 1911, p. 1302, and was commented on editorially in THE JOURNAL of the same date, and also of Oct. 7, 1911.

it submitted its products to the Council on Pharmacy and Chemistry for approval. The Council, having assured itself that the company's proprietary preparations of digitalis and of ergot—Digitol and Cornutol, respectively—were sold under proper claims and precautions, has accepted them for inclusion with New and Nonofficial Remedies[3] along with an exact statement of the strength to which the preparations are adjusted. How long it will be before the manufacturers of other proprietary digitalis and ergot preparations secure similar endorsements is as yet uncertain. It will unquestionably depend on the length of time that physicians continue to use preparations whose reliability is attested only by those who are interested in the financial success of the products.

MEDICAL HUMOR

For relaxation from his serious work the physician finds little humor that is distinctly medical, and so occasionally creates it. We commented some time ago on the humorous special number of a German medical weekly. Now comes the *Journal of Humorous Medicine*, a supplement to the February number of the *California State Journal of Medicine*. It contains some alleged articles, a play, etc., read before the San Francisco County Medical Society, when the members evidently had a night off. A report is made of a singular case, pleural in origin, in which a man who did not go out much suffered from roomertism, and, though a high liver, showed signs of hepatoptosis. In an accident reported, a physician fractured his coccyx when attempting to sit on a weakly constructed chair placed by a patient's bedside. The editor remarks that this is the first instance of the doctor's carelessness in examination of stools. Announcement is made of a vaccine of the hay bacillus which cures hay fever, while one made of melon seeds will cure meloncholia. Some jokes are rather labored, but what of it? The intentions are good and the results happy. We congratulate the editor, Dr. Philip Mills Jones. Another piece of medical facetiousness just received is the *Medical Gewalt*, "officious organ of the Associated Alumni of Mount Sinai Hospital, New York; published for the disintegration of medical inflammation; foundered 1902; resuscitated annually." This eight-page periodical is said to be "copy writ by the editor and admitted to be second-class stuff." It contains original articles, society reports, editorials, etc. The editor dodges responsibility with the remark: "If the *Gewalt* does not please you—forget it. We have other troubles." THE JOURNAL is flattered by several pertinent references. Our Department of Queries and Minor Notes is imitated. To a correspondent who asks for references to the literature and says: "For example, what can I find on bread?" the editor answers "Butter." In a society report someone is reported as having conducted the ceremonies in "his usual happy, external jocular vein." In the advertising department we find: Antiflowgistine for leukorrhea; U Reform for cystitis; Amour and Company's He Licks Her Ten Times, which is recommended as an aid to digestion and a good vehicle for idiots, bromids, etc.; Sharp and Do' Em's complete line of tablets of all varieties, from alimentary to the cemetery; Mennen's Powder for meningitis; Victor Cackle & Co.'s Slamiton, Pileiton, Prurital, Damitall, Watsitphor, etc. An announcement in the advertising department states that the *Gewalt* will not admit to its advertising pages any of the proprieties. Judging by some of the advertisements, this caution is not out of place.

3. See page 701, this issue of THE JOURNAL.

PROPERTY RIGHTS VS. PUBLIC HEALTH

A New York dealer in drugs was recently prosecuted for counterfeiting the trade-mark of Carter's Little Liver Pills and for selling goods bearing this counterfeit mark. He was found guilty and, although it was the first offense, the court refused to impose a fine, but sentenced him to four months' imprisonment in the penitentiary at hard labor without the possibility of commutation for good behavior. Counterfeiting, of course, is a serious crime and as such should be punished. Nevertheless, there are more serious crimes, such, for instance, as adulterating foodstuffs, selling putrid material for good or dispensing dangerous habit-forming drugs, like cocain, in the shape of soft drinks. All these crimes are crimes against the person—against the public health—against the very lives of the people. Although the government officials have brought evidence sufficient to convict over 1,200 firms or individuals of violating the federal Food and Drugs Act, and although this act provides that its violation may be punished by imprisonment, yet in not a single instance has the court imposed any sentence more severe than a fine. And the majority of the fines have been trivial to a degree. A Canton (Ohio) concern was convicted of selling a soft drink containing cocain. The court considered a $25 fine sufficient punishment. A St. Louis house sold a powder for infants that was said to make "teething" easy; it contained opium. A $10 fine was sufficient punishment. An "agreeable and efficient tonic" was found to contain cocain, although the presence of this drug was not stated. In this case, the court suspended sentence! Some day, possibly, a court may be found that will consider the crimes of making drug fiends of young people, of poisoning babies with opium mixtures or of killing women with headache powders as more serious offenses than the counterfeiting of the label of a fraudulent "patent medicine." Apparently, that time is far off.

BLIGHTING A REPUTATION

Few American manufacturers of pharmaceutical products have stood as high in the estimation of the medical profession as the firm of E. R. Squibb & Sons. None has been higher. For years, Squibb's name on the labels of medicinal products stood for honesty and reliability. This reputation was deserved and retained so long as Dr. E. R. Squibb controlled the concern. After Dr. Squibb's death, the responsibility for the reputation of the concern seemed to be divided, and, while the name remains, recent events indicate that the principles governing the house of E. R. Squibb & Sons have changed. Within the last few months, the medical profession has received a pamphlet from this firm dealing

with a wonderful new remedy put out first under the proprietary name "Thoradin," which was later changed to "Thoremedin." In the past, E. R. Squibb & Sons had been particularly free from the blight that seems to be inseparable from the exploitation of proprietary remedies. Possibly because all of the products this house put out were non-proprietary in character and relied exclusively on the brand-mark, the firm's advertising matter was practically free from exaggeration and falsehood. With its entrance into the proprietary field, the company apparently intends to make up for lost opportunities; the literature of Thoremedin is typical of all that is bad in proprietary exploitation. The claims made for this nostrum were so radical that the Association's chemists were asked to examine the product. The result of this examination appears elsewhere.[1] As the claims made for therapeutic effect were such as competent dermatologists could prove or disprove, Dr. W. A. Pusey was asked to investigate them and the product. With this request he kindly complied, and the result of his practical experiments appear in the Propaganda for Reform department of this issue. Let it be said in passing that Dr. Pusey has done the profession a distinct service; it would be well if more work of this kind could be undertaken by men who are peculiarly fitted for it. Dr. Pusey's exposé, while both interesting and instructive, will come as a shock to those members of the medical profession — and they are many — who have always believed that the name of Squibb was the very antithesis of humbug or deceit. There is nothing sadder in commercial or professional history than to see the honored name of a great firm brought into discredit by the penny-wise and pound-foolish tactics of those who consider dividends of greater moment than reputation.

A SINGLE FEDERATION OF STATE LICENSING BOARDS

In this country the licensing of physicians is a state and not a national responsibility. At present there are in the forty-eight states sixty-one distinct licensing boards, scarcely any two of which adhere to the same methods of testing the ability of those who seek the right to practice medicine. While some of the states have excellent laws and competent boards to enforce them, there are many which afford insufficient protection to the public against uneducated doctors. In some of the states conditions are bad — practically hopeless it would seem if left to themselves — on account of political entanglements. Some influences from the outside could be exerted with success, and one source of such influence would be a single federation of state boards. If such a federation could be formed holding to fixed educational standards as a requisite for membership and having as its chief object a nation-wide elevation of the standards of licensure, a strong influence over the individual states could doubtless be exerted, especially through an effort to administer interstate reciprocity on an intelligent basis — the basis of an accurate knowledge of conditions actually existing in each state. Two rather loosely organized federations have existed for several years, but neither has been able to wield so much influence for good as might be wished, and as could be exerted by a single organization representing at least a majority of the state boards—an organization in which membership would be an honor and an opportunity for service. At present the two federations represent respectively only fourteen and seventeen states, and several states have membership in both organizations, so that only twenty-three states are represented in the two federations. It is to be hoped, therefore, that the movement now on foot to merge the two will be successful, and that the new organization make special effort to develop better licensing regulations in the states most needing improvements. Medical colleges are already making rapid progress. The greatest need at present is for a movement by state boards which will bring a corresponding improvement throughout the country in testing the qualifications of those who are to practice medicine. We believe that this can be attained quickly and effectively through a single and efficient federation of state licensing boards.

1. Propaganda for Reform department, p. 719.

Medical News

ALABAMA

New Dean for Medical College.—Dr. Eugene D. Bondurant, Mobile, has been appointed dean of the University of Alabama, Medical Department, vice Dr. Rhett Goode, deceased.

Memorial Hospital Company Incorporated.—The Memorial Hospital Company has been incorporated in Selma, with the object of maintaining and operating hospitals and conducting a training school for nurses. The incorporators are physicians of Selma, headed by Dr. F. Goodwin Du Bose.

Mobile Alumni Organized.—Alumni of the University of Alabama, Medical Department, Mobile, met February 21 and organized a local branch of the Alumni Association of the University of Alabama. Dr. John O. Rush was elected temporary chairman, and Dr. Eugene Thames, temporary secretary.

ARIZONA

State Association Meeting.—The Arizona Medical Association is to meet in Bisbee, April 7, and will adjourn to Douglas, April 8, to be entertained with a banquet and ball by the Cochise County Medical Association.

Activities of Maricopa County Physicians.—The Maricopa County Medical Society commenced on December 9 last a series of public health lectures, which are being given every week under the auspices of the society and the Phoenix Young Men's Club. The subjects include trachoma, tuberculosis, preventable diseases of children, garbage and sewerage, ventilation and fresh air, flies, milk and dairying, wells, cesspools and drinking water, venereal diseases of men and women, fakes and nostrums and climate and health.——Dr. Herbert K. Beauchamp has been elected president of the society and Dr. W. Warner Watkins, secretary, both of Phoenix.——The February issue of the bulletin of the Maricopa Medical Society announces that at the next regular meeting of the society a report regarding the proposed revision of the state medical laws is to be expected. The bulletin also contains an open letter to druggists.

ARKANSAS

New County Hospital.—The county and probate judge at Pine Bluff has named a commission to sell the present Jefferson County Hospital and Poor Farm, and to purchase a new site and establish a suitable institution.

New Officers.—Greene County Medical Association: president, Dr. William W. Verser, Brighton; secretary-treasurer, Dr. Olive Wilson, Paragould.——Crittenden County Medical Society: president, Dr. Logan C. McVay, Marion; secretary-treasurer, Dr. Thomas S. Hare, Crawfordsville.——Phillips County Medical Society: president, Dr. William C. King; secretary-treasurer, Dr. William R. Orr, both of Helena.——Texarkana Physicians' Business Association: president, Dr. Robert H. T. Mann; secretary, Dr. Francis M. Leonard.

DELAWARE

Personal.—Dr. Edward M. Vaughan has succeeded Dr. Charles A. Ritchie, resigned, as health physician of Middletown.——Dr. L. August H. Bishop, Dover, was thrown in a ditch under his overturned buggy in a runaway accident recently, but fortunately was not injured.——Dr. James H. Wilson, Dover, secretary of the state board, is reported to be seriously ill after an operation for the removal of gall-stones. ——Drs. Pietro A. M. Rovitti, Harry M. Frist, George R. Foulke and Napoleon B. Morrison have been elected vaccine physicians of Wilmington.

Sanatorium for Colored Patients.—The Delaware State Tuberculosis Commission, at its quarterly meeting, announced that it had $20,000 at its disposal; one-half raised by the commission and the other appropriated by the state legislature. Of this $10,000 is to be used in the establishment of a sanatorium for colored tuberculosis patients, and the other half will be applied to the administration building at Hope Farm. During the year 559 patients were treated for tuberculosis at the seven dispensaries in the state. Of these, fifty-two were sent to sanatoriums. There was distributed among the consumptives during the year 10,000 pieces of literature.

IDAHO

New Quarters for Health Department.—The capital commission has decided to convert one of the nassages leading to the new wing of the building into rooms for the State Health Department, including the bacteriologic and chemical laboratories and sample rooms for storage of food samples.

City Pest-House Prohibited.—The city health officer of Wallace, Dr. F. Leo Quigley, states that the state law distinctly provides that transportation of small-pox patients into the boundary limits of the city is a misdemeanor and that, therefore, small-pox patients from Kellogg and Wardner must be cared for outside of the city.

ILLINOIS

Commitments of Insane.—Dr. Charles Eberlein, Chicago, senior physician at Cook County Hospital for the Insane, Dunning, maintains that many commitments to institutions are unjust, as the patients are alcoholic cases who should be cared for in a municipal hospital. In his opinion, the Detention Hospital should be able to care for four hundred patients and should be prepared to keep these patients, if necessary, for five or six months before commitment to institutions for the insane.

Hospital Notes.—The board of health of East St. Louis has made a demand on the mayor and city council for a city emergency hospital in the downtown district, provided with cots and an operating room equipment for emergency relief for the sick and injured.——Will County Medical Society, at its meeting February 20, unanimously adopted resolutions asking that the city, township and county cooperate in the establishment of a contagious disease hospital and dispensary to be erected in Joliet.——At the annual meeting of the directors of the Lake County Tuberculosis Institute in Waukegan, February 21, the number of directors was reduced from twenty-five to twelve. Drs. W. H. Watterson and L. H. Tombaugh were elected directors for one year; Dr. J. L. Taylor, Libertyville, a director for two years, and Drs. J. C. Foley, F. C. Knight and W. C. Bouton, directors for three years.

Chicago

Fire in Hospital.—A fire in the basement of St. Joseph's Hospital, February 25, caused a loss of about $1,000. By systematic and cool-headed work on the part of the interns, sisters and nurses, the 130 patients in the hospital were kept from panic.

Personal.—Dr. and Mrs. Harry Spenser-Brown, formerly of Chicago, but now of Paris, are visiting in Chicago.——Dr. Henry B. Favill has been elected vice-president of the Beta Theta Pi Fraternity.——Dr. H. C. Castor has been elected president of the National Association of Life Underwriters.

Conference on Mental Diseases.—The West Side Branch of the Chicago Medical Society, of which Dr. W. T. Mefford is president, is perfecting arrangements for a series of meetings April 17 to 19, to discuss the various phases of mental disease. Papers have been promised by alienists from several states.

INDIANA

State Sanitary Meeting.—The Indiana Sanitary and Water Supply Association, at its annual meeting in Indianapolis on February 16 reelected F. C. Jordan, Indianapolis, president; Dow R. Gwin, Terre Haute, and H. E. Barnard, chief chemist of the state board of health of Indianapolis, Dr. Charles S. Woods, city sanitarian of Indianapolis, J. W. Elms, Cincinnati, and J. W. Peck, Evansville, vice-presidents, and Dr. William F. King, assistant secretary of the State Board of Health, Indianapolis, secretary.

Personal.—Dr. Harry S. Leonard is seriously ill at his home in Indianapolis with septicemia, due to an autopsy wound.—— Dr. Albert R. Burton, Princeton, while making a night call, February 15, fell, fracturing his skull, is reported to be improving.——Dr. James Biggerstaff, Bippus, is said to have recovered damages of $200 from the Western Union Telegraph Company, on account of the failure to deliver a message requesting him to make a call.——Dr. John W. Crismond, Anderson, is reported to be seriously ill from cerebral hemorrhage at St. Johns Hospital in that city.——Dr. William G. Ralston, Evansville, celebrated his ninety-third birthday anniversary, February 13.

MARYLAND

Baltimore

Health Conditions in Maryland.—At a recent noonday luncheon of the Baltimore City Club, Dr. William H. Welch, who presided, urged that the state give each county $1,500 a year for the employment of a local health officer who should give his entire time to the work and who should be vested with the proper authority.

Public Health Exhibit.—The public health exhibit of the Medical and Chirurgical Faculty of Maryland, which has just closed, was notable. It was under the charge of a large committee, headed by Dr. William Royal Stokes. One of the most interesting parts of the exhibit was that illustrating the sanitary work at Panama, which showed models of rat-infested houses and houses protected against rats. Other exhibits of especial interest were those relating to malaria, typhoid fever and tuberculosis.

Personal.—Dr. Emil Novak was operated on for appendicitis at Mercy Hospital, February 25.——Dr. J. H. Hogan has been appointed physician in charge of the accident department of Mercy Hospital, vice Dr. William W. Hobson, resigned.——Dr. Conrad P. Strauss has recovered from his recent operation at St. Agnes Hospital.——Dr. John Woolman Churchman, who recently resigned as house surgeon at Johns Hopkins Hospital to carry on research work in the hospital, has been appointed assistant professor of surgery in the Yale Medical School, New Haven, Conn.

MASSACHUSETTS

Hospital Opened.—The Symmes Hospital, Arlington, was opened to the public last week. During the afternoon tea was served in the reception room and the opening was in charge of the Woman's Aid Association of the hospital. After the inspection, which lasted two days, the hospital was opened to receive patients.

Defective School Children.—Dr. William J. Gallivan, chief of the Bureau of Child Hygiene, connected with the Board of Health, Boston, reports examinations of 82,224 school children. Of these 65 per cent. were found defective in some particular. The chief defects noted were: defective teeth in 40.8 per cent.; hypertrophied tonsils in 22.6 per cent.; enlarged cervical glands in 12.4 per cent.; defective nasal breathing in 8.2 per cent.; skin disease in 5.5 per cent.; malnutrition in 3.5 per cent.; cardiac disease in 2.8 per cent.; orthopedic defects in 2 per cent.; and of these, sixty-four out of the 1,638 children were of a tuberculous nature and of pulmonary disease 1.4 and of the 1,181 children thus affected, sixty-three showed evidence of pulmonary tuberculosis. The mayor announced that plans are being considered for the cure of these defects by the agency of the family physician, and through clinics in hospitals, after the approval of the parents has been obtained.

MINNESOTA

Combat Infectious Disease.—Dr. H. M. Bracken, St. Paul, secretary of the state board of health, is making strenuous efforts to stop the spread of trachoma and other infectious diseases among the Indians on the White Earth reservation. Only those living on allotments and under local government can be looked after by the state.

Antituberculosis Exhibit.—The Free Antituberculosis Exhibition prepared under the auspices of the Minnesota State Board of Health was installed in Cannon Falls, February 6, and is creating considerable local attention. In connection with the exhibit, lectures are being given and demonstrations made working along the line of conservation of life.

Personal.—Dr. William J. Mayo, Rochester, was given the honorary degree of LL.D. by the University of Pennsylvania, February 22.——Drs. Thomas McDavitt, St. Paul; John E. Campbell, South St. Paul, and Albert G. Moffat, Howard Lake, have been appointed members of the state board of medical examiners.——Dr. Walter J. Marcley, Minneapolis, formerly a member of the staff of the State Tuberculosis Sanatorium, Walker, has been elected executive officer of Hopewell Hospital, Minneapolis.

NEW YORK

Dispensary for Medical College.—It is reported that the trustees of Syracuse University have decided to erect a teaching dispensary near the medical college, to cost about $75,000.

Straus Milk Charity Incorporated.—The Nathan Straus Pasteurized Milk Laboratories has been incorporated to establish infant milk depots throughout the state and dispense pasteurized milk free or at cost.

Personal.—Dr. Thomas W. Salmon, New York City, has resigned as chairman of the New York State Board of Alienists.——Dr. Clara Barrus, for seventeen years assistant physician in the Middletown State Homeopathic Hospital, has opened a home for mild mental and nervous invalids at Pelham.——Dr. Rupert Folger, Whitestone, fractured his arm while cranking his automobile, February 25.——Dr. Charles F. Clowe, Schenectady, is reported to be critically ill with typhoid fever at his home.

Health Institute for Poughkeepsie.—The State Department of Health will hold a health institute in Poughkeepsie, March 7 and 8, in charge of Dr. Hills Cole, New York City. On the first day the laboratory and its uses will be discussed and in the evening, at a public meeting, the question of the treatment of diseases will be taken up. The control of communicable diseases, nuisances and the disposal of wastes, county sanitation and legal questions affecting the health officer will occupy the second day, and in the evening there will be an illustrated public lecture.

State Society Meeting.—The Medical Society of the State of New York will hold its one hundred and sixth annual meeting in Albany, April 16-18. The annual oration on medicine will be delivered by Dr. Harvey W. Wiley, Washington, D. C., and the annual oration on surgery by Dr. John M. T. Finney, Baltimore. On the first evening there will be a general meeting in the assembly chamber of the capitol, at which addresses will be delivered on "Prevention of Blindness and the Instruction of the Blind Child" by Dr. George E. deSchweinitz, Philadelphia; "Prevention of Deafness and Instruction of the Deaf Child" by Dr. G. Hudson Makuen, Philadelphia; "Prevention of Insanity" by Dr. Albert Warren Ferris, New York City; and "Prevention of Tuberculosis" by Homer Folks of the State Board of Charities of New York. On the second evening a "public meeting" will be held at the capitol, when Dr. Walter B. Cannon, Boston, professor of physiology in Harvard Medical School, will deliver an address on "Benefits of Animal Experimentation to Mankind." Following this address, the president's reception will be held at the Ten Eyck.

New York City

New Officers.—Bronx Medical Association: president, Dr. Charles Graef; recording secretary, Dr. William J. Walker.

Small-Pox on Liner.—The White Star liner *Cedric* came into port from the Mediterranean on February 28 having on board a case of small-pox among the cabin passengers.

Insane Employee Poisons Babies.—The mystery of nine deaths of babies in the Brooklyn Nursery and Infants' Hospital has been solved by the confession of a woman employed in the kitchen of the hospital, who is said to have admitted that she placed oxalic acid into the bottles for the babies' milk.

Hospital to Be Enlarged.—At the annual meeting of the directors of Beth Israel Hospital it was reported that the building fund had reached $198,694, but it is still undecided whether the present building will be enlarged or whether a much larger hospital will be built in another locality. During the past year the hospital provided treatment for 1,948 patients but was obliged to turn away 2,047 for lack of accommodations.

Infant Mortality Lower.—According to the bulletin of the Department of Health, there were only 258 deaths of babies under one year of age in this city during the week ended February 24 as compared with 309 for the corresponding week of last year. The total number of deaths since January 1 amounts to 2,035 as compared with 2,137 for 1910. There were only twenty-three deaths of infants from intestinal ailments during the week as compared with fifty for the corresponding week of last year. The Board of Health attributes this low mortality to the milk stations and says that at present the stations are caring for 3,011 babies. There are at present thirty-three milk stations open.

Ophthalmia Should Be Reported.—In the annual report of the Committee on Prevention of Blindness of the New York Association for the Blind the statement is made that there are 2,018 blind children in seventeen schools, of whom 521 are blind because of ophthalmia at the time of birth. In making a local investigation of the subject in cooperation with the Department of Health the committee found that ophthalmia occurred much more frequently than was supposed, and that the requirement that redness and swelling of the eyes within two weeks after birth shall be reported to the Board of Health is not generally obeyed. It is hoped through investigation and prosecution of cases of neglect, with attendant publicity, every case of ophthalmia neonatorum will be reported to the Board of Health. The general impression conveyed by this investigation was that there should be a careful and scientific examination of school children's eyes and that if the results of such an examination should corroborate the figures stated in the report it would be desirable to have special classes for children with seriously impaired vision.

Hospital Conference.—At a special meeting of the executive committee of the Hospital Conference of the City of New York the nursing situation was considered and the president was authorized to appoint a special committee to secure either such modification of the Nurse Practice Act or of the regulations adopted by the education department under the same act, or such interpretation by the education department of the existing regulations as shall render it possible for the hospitals of the city to continue the training of nurses in sufficient numbers to meet the public demand. The committee at a meeting held February 13 adopted resolutions setting forth that the strict enforcement at this time of the existing regulations of the State Education Department governing the admission of probationers to registered training schools for nurses is impracticable; that the restriction of the admission of probationers is working a hardship on hospitals which are conducting properly equipped ethical training schools, and that this restriction has caused a dearth of pupils, and hence of New York graduates, and tends to attract to New York City large numbers of undesirable nurses and poorly trained nurses of inferior schools, and urging on the education department the adoption of such amendments to the existing regulations as will give to the authorities of properly organized, registered training schools a freer hand in the selection of probationers.

NORTH CAROLINA

New Buildings for Medical College.—Plans are being made for the erection of an entire new set of buildings for the North Carolina Medical College at Charlotte. The present site in the city is to be sold and a larger piece of ground secured in the suburbs, adjoining which the city will build a charity hospital to be operated in connection with the college.

Personal.—Dr. B. W. Page has been elected superintendent of health of Robeson County.——Drs. Isaac W. and Yates W. Faison have been placed in charge of the department of pediatrics of the Charlotte Sanitarium.——The supreme court is said to have decided that Dr. James J. L. McCullers, McCullers, is legally superintendent of health of Wake County.——Dr. William J. Lumsden, Elizabeth City, fell on the ice recently and sustained painful injuries.

Asheville's Health Problems.—The report of the joint committee of the Asheville Board of Trade and Buncombe County Medical Society, outlining plans for the better handling of the health problems of Asheville, recognizes Asheville's position as a resort for tuberculosis patients. It aims to draw certain and emphatic distinctions between inns and boarding-houses which accept guests who are ill, and those which do not. It is in harmony with the ultimate idea of segregation of communicable diseases, and urges the establishment of a great sanatorium, which by reason of its situation and equipment shall attract general attention.

OHIO

All Municipal Officers But One Physicians.—In the reorganization of the village and township of Oxford, Dr. Harry H. Smith is president of the village board; Dr. D. D. Borger, president of the township board of education; Dr. William S. Alexander, president of the village board of education, a member of the village council and president *pro tempore* of that body; and Dr. Harvey R. Cook is a member of the village

school board. The only officer not a physician is a Presbyterian clergyman.

Personal.—Dr. Addison W. Hopkins, who has already served for twenty-one years as health officer of Ashtabula, has been reelected to that position.——Dr. Corliss R. Keller, Hamilton, is seriously ill in Mercy Hospital with pneumonia.——Dr. Charles C. Hill, Athens, fell while making a call in West Athens on February 16, fracturing both bones of his right forearm.——Dr. Harry T. Miller has succeeded Dr. D. King Gotwald as president of the Springfield City Hospital, and Dr. William P. Ultes has been elected secretary.——Dr. Howard H. Herman has been succeeded by Dr. Harry E. Palmer as a member of the medical staff of the Miami Valley Hospital, Dayton.——Dr. Myron S. Clark has been reelected vice-president and Dr. Harry E. Welch, health officer, Youngstown.

PENNSYLVANIA

New Officers.—Erie County Medical Society: president, Dr. Guy C. Boughton; secretary, Dr. J. M. Burt, both of Erie.

Hospital News.—Dr. E. F. McGinty, Pittston, announces the opening of a new private hospital in Scranton.——The president of the Rittersville State Hospital Board announces his intention of enlarging the hospital property by the purchase of adjacent farms.——A sun parlor is to be erected at the front entrance of Mercy Hospital, Altoona.

Personal.—Dr. G. T. Matlack, Wilkes-Barre, has been appointed a member of the staff of the Danville Hospital for the Insane.——Dr. L. C. Robinhold, Auburn, was thrown from his buggy in a runaway accident, February 25, and sustained painful injuries.——Dr. W. N. Pringle, Johnstown, sailed on a trip around South America, February 24.——Drs. C. F. Heard, North East, and D. N. Dennis, Erie, are in Europe.

Typhoid at Coatesville.—On March 1, four new cases of typhoid were reported, making a total of 251 under treatment. The death list totals 16. The report of Dr. Samuel G. Dixon, State Health Commissioner, covering the epidemic shows that it was largely due to carelessness, and demands that the borough augment its pumping capacity at the pumping station; abandon the present gravity supply so soon as the additional pumping facilities are installed and install at once a temporary filtration plant at the pumping station to chemically treat and filter every drop of water pumped into the borough reservoir. It also shows that the watershed of Sucker Run and Heffner Creek, from which the borough gets its water supply, is and has been for the last three years in a condition detrimental to public health and one that might have caused an epidemic of typhoid fever, and that the silk-mill tail-race, from which water was pumped in an emergency, was badly polluted by sewage from the Coatesville Hospital. The report also states that the Coatesville Council has always failed to file any plans of its water system with the Commissioner of Health at Harrisburg as required by law. Dr. Samuel G. Dixon, the chief medical inspector, Dr. C. J. Hunt, and Miss Katherine Gillespie, state nurse, have practically taken over the powers of the Coatesville Board of Health.

Philadelphia

New Home for Clinical Club.—The Philadelphia Clinical Association, an organization of medical men and chemists, has made final arrangements for the purchase of a permanent club house in the neighborhood of Broad street and Columbia avenue. The committee appointed to transfer the property consists of: Drs. G. Morton Ilman, William McKeage, Ellis E. W. Given, B. F. Devitt and Harry A. Duncan. The cost of the building and lot will be about $9,000 and the amount will be raised through the sale of bonds to association members.

University Society Election.—At the annual meeting of the Philadelphia Alumni Society of the Medical Department of the University of Pennsylvania, February 17, the following officers were elected: president, Dr. Herbert B. Carpenter; honorary vice-president, Dr. Edgar F. Smith, Provost; vice-presidents, Drs. J. Gurney Taylor, Howard A. Sutton and John J. Robrecht; corresponding secretary, Dr. B. Franklin Stahl; recording secretary, Dr. Harvey E. Schrock; treasurer, Dr. Isaac H. Jones; executive committee, Drs. Lewis H. Adler, Jr., George C. Stout, Clarence P. Franklin, George G. Ross and William S. Wray.

Personal.—Drs. S. Weir Mitchell, Edgar F. Smith, Robert G. LeConte, Samuel G. Dixon and J. William White were the guests of honor of the New York Alumni of University of Pennsylvania at a dinner at the Waldorf-Astoria on February 10, and Dr. S. Weir Mitchell's name was inscribed on the "Honor Cup," the permanent trophy of the society, for the year 1912.——Dr. Fielding O. Lewis has been appointed to fill a vacancy on the staff of the Philadelphia General Hospital.——Dr. Alexander C. Abbott, formerly chief of the Bureau of Health, Philadelphia, received the honorary degree of D.P.H. (doctor of public hygiene), from the University of Pennsylvania, February 22.——Dr. Nathan G. Ward has been elected president of the Philadelphia Clinical Association.

Plan to Aid Health Boards.—The County Medical Society has formed a committee of public preventive medicine, to work in connection with local, state and national health authorities to aid in the dissemination of measures to prevent the spread of disease. Public-spirited physicians have banded together under the chairmanship of Dr. Alexander C. Abbott, former chief of the Bureau of Health, and have placed themselves in readiness to support the government in every measure it takes to conserve public health. The committee will enlist in the local crusade against tuberculosis; help in the work of baby saving, and further the efforts of the milk commission and the department of health to gain a pure milk supply for the city. The work of the committee will be carried on by means of public lectures and personal effort. If necessary, the committee will lend its aid as an advisory board to the health authorities, when problems of municipal hygiene are involved.

Public Warned to Boil Water.—Owing to the freshets, the river is bringing down the winter's accumulation of filth from up state and even filtration cannot entirely eliminate the odor and taste. This is an annual occurrence at this time of year. The turbidity in the case of the Delaware River at Torresdale is the highest in the city's history. Whereas the raw water in the river at this point ordinarily shows on the Water Bureau's turbidity scale as from 1 in 1,000,000 parts to 2 in 1,000,000 parts, the turbidity on February 28 was 2,100 to 1,000,000 parts. In twenty-four hours the city's filtration plants removed nearly 1,800 tons of mud from about 330,000,000 gallons of water. Dr. Joseph S. Neff, director of Public Health and Charities, warns the public to boil the water used for drinking purposes. This practice must be continued, especially in West Philadelphia. Even after the turbidity and the odor have disappeared it will be necessary to continue to boil the water for at least two weeks after conditions become normal.

WASHINGTON

The Rat Campaign.—Dr. Louis L. Lloyd, U. S. P. H. and M.-H. Service, Seattle, has held a conference with the municipal commission in Tacoma relative to the methods to be used in the extermination of plague-infected rats.

Leper Feared.—John Ruskin Early, the leper, who is said to have contracted the disease during the Spanish-American War in the Philippine Islands, and who has been located temporarily in Tacoma, is threatened with ouster by his neighbors, who, at an indignation meeting held recently, are said to have adopted resolutions that the United States Government should take charge of the unfortunate and remove him from the community.

WISCONSIN

Personal.—Drs. John L. Yates and Nelson M. Black, Milwaukee, were slightly injured in a wreck on the Pennsylvania Railroad in Huntingdon, Pa., February 15.——Dr. Gustav Schmitt, Milwaukee, has been elected president of the Baron von Steuben Monument Association.——Dr. Joseph Schneider, Milwaukee, has made a donation of $25,000 to the University of Würzburg, as an endowment fund, the income of which is to be devoted to the free treatment of poor eye patients.

GENERAL

Small-Pox on Training Ship.—Owing to a death from small-pox at the training station at Norfolk, Va., the U. S. S. *Franklin* and the training station have been placed under a strict quarantine.

Medical Society of the Missouri Valley.—The preliminary program of the semiannual meeting of the Medical Society of the Missouri Valley, to be held in Colfax, Iowa, March 21-23, has appeared. The arrangements include a three days' meeting, with two evening sessions, and a clinical day at the hospitals in Des Moines, which is located twenty-three miles from Colfax.

Tri-State Meeting.—The fourteenth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia was held in Columbia, S. C., February 21-22, under the presidency of Dr. J. Howell Way, Waynesville, N. C. Norfolk, Va., was selected as the next place of meeting and the following officers were elected: president, Dr. Archibald E. Baker,

Charleston, S. C.; vice-presidents, Drs. Augustus B. Knowlton, Columbia, S. C.; Andrew J. Crowell, Charlotte, N. C., and Alfred L. Gray, Richmond, Va.; and secretary-treasurer, Dr. Rolfe E. Hughes, Laurens, S. C. (reelected).

Denison Prize Essay.—By the will of Dr. Charles Denison, Denver, who died in January, 1909, $10,000 was bequeathed "of which every two years $1,000 is to be devoted to a prize for the best essay of between 5,000 and 10,000 words on the subject "The Relation of the Sun as the Source of Electric Energy to Health and to the Vital Functions"; said prize to be open to any one and to be judged as to its worthiness by a prize committee of three, one to be appointed by the Denver City and County Medical Society, one by the American Climatological Association, the other to be my son, Henry S. Denison, M. D. . . . it being understood that . . . the committee reserves the right to refuse reward to any or all essays submitted if none attain to a worthy standard which they will fix, or that they may have to divide the prize if in their judgment it seems best to do so." For further information address Dr. Henry S. Denison, 1405 Glenarm street, Denver.

National Committee for Mental Hygiene.—At the meeting of this organization in New York City, February 17, it was announced that an anonymous gift of $50,000 had been given toward the work that had been planned and that another $50,000 had been promised contingent upon the raising of $200,000. This fund will make possible the inauguration of a national movement for mental hygiene. It will take the form of a systematic effort to improve conditions affecting the insane as well as the education of the sane on the subject of mental disorders, their known causes, prevention and cure. A survey of the national field is to be made by a subcommittee of which Dr. William L. Russell, superintendent of the Bloomingdale Hospital is chairman. Dr. Thomas W. Salmon, U. S. P. H. and M.-H. S., has been granted a leave of absence for the purpose of taking charge of the active work of this committee, which has opened an office at 50 Union Square. The officers elected at this meeting were: president, Dr. Lewellys F. Barker, Johns Hopkins University; vice-presidents, Dr. William H. Welch, Johns Hopkins Medical School; and Dr. Charles P. Bancroft, superintendent of the New Hampshire State Hospital, Concord, N. H.; treasurer, Otto T. Bannard; chairman of the executive committee, Dr. George Blumer, dean of the Yale Medical School; chairman of the finance committee, Prof. Russell H. Chittenden, director of the Scientific School of Yale University; and secretary, Clifford W. Beers.

FOREIGN NEWS

Coming Medical Meetings Abroad.—Besides those previously mentioned in these columns, may be cited the eighth annual meeting of the German roentgenologists, to open at Berlin April 14, two days before the twenty-ninth annual meeting of the German internists, which convenes at Wiesbaden, April 16 to 19. The topic appointed for discussion at the latter is the use of the Roentgen rays in diagnosis and treatment of stomach and intestine trouble. The eleventh annual meeting of the German orthopedic surgeons is scheduled also at Berlin, April 9 to 13, and the forty-first annual meeting of the German surgical society for April 10 to 13, also at Berlin.——The annual meeting of the obstetricians and gynecologists of Germany is to be held at Berlin May 29-31, and the Sixth International Congress for Obstetrics and Gynecology convenes at Berlin September 10-13.——The annual meetings of the French internists and surgeons are to be held at Paris in October as usual. The topics to be discussed by the internists (*xiii congrès de médecine interne*) are oxaluria and oxalemia; acute infectious colitis, and treatment of hemorrhagic syndromes.

CANADA

New Officers.—South Ontario and West Durham Medical Association: honorary president, Dr. John T. Fotheringham, Toronto; president, Dr. D. Alfred Farncomb, Newcastle; secretary-treasurer, Dr. Joseph F. Finnegan, Oshawa.

Enforcement of Vaccination Laws.—The provincial board of health of Quebec has determined to take legal action to recover from the town of Beauport the fine of $25 a day, provided for by law, for its neglect to enforce the by-law regarding compulsory vaccination.

Hygiene in Schools.—At the sixth annual convention of the Association of School Trustees for the Province of Alberta held recently in Calgary, the most important resolution discussed was the request that instruction in hygiene be placed on the same basis as the other subjects in the school curriculum.

National Department of Health Considered.—In parliament the Right Hon. R. L. Borden informed the House of Commons recently, in reply to a question, that the government is considering the establishment of a department of health for the dominion, but that the question of the minister of health has not yet been discussed.

Personal.—Dr. J. G. Adami, professor of pathology at McGill University, Montreal, is said to have declined the offer made him by Northwestern University, Evanston.——Dr. Ernest L. Williams has been elected president of the board of health of London, Ont.——Dr. A. S. Moorhead, Toronto, has been made a Fellow of the Royal College of Surgeons, London.

New Medical Act.—Legislation has recently been enacted by the Canadian parliament placing the medical profession of Canada on a national basis. The Canadian medical act establishes a Canadian Medical Council to grant a dominion license, entitling the holder to practice his profession anywhere in Canada. Hitherto only provincial licenses have been issued.

Small-Pox.—Comptroller Wilson urges that the Ontario government should establish north of Pembroke a provincial small-pox hospital, to which cases of the disease which occur in the lumber camps may be transferred and cared for. At present these patients are shipped to Ottawa.——Hemorrhagic small-pox is reported to be epidemic in Champlain and L'Islet counties.

Dominion Association Meeting.—The Canadian Medical Association will hold its annual meeting August 10-14, in Edmonton, Alberta. This is the first time the association has held a meeting in the Province of Alberta and the committee of arrangements is making strenuous efforts for the success of the meeting that the occasion may be memorable in the medical annals of Canada.

Fighting Tuberculosis.—At a meeting of the board of trustees of the Brant Sanatorium, Brantford, it was decided to proceed to collect immediately $25,000 for building and furnishings of the sanatorium. A site has already been donated and $14,000 has been subscribed for the building fund.——The Strait Shore site has been approved for a tuberculosis hospital and day camp for St. John, New Brunswick.——Mr. William Reid, president of the Reid-Newfoundland Company, has made an offer to the government to erect and equip a sanatorium at St. John, at a cost of $50,000. Two of Mr. Reid's brothers have offered to erect sixteen cottage hospitals in outlying districts, to cost a similar amount.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 24, 1912.

The Crisis in the Profession in Connection With the Insurance Act; Defeat of the Extreme Party

The special representative meeting of the British Medical Association to decide the attitude to be adopted by the profession toward the insurance act has been held. As foreshadowed in my previous letter, a keen contest took place between the two parties in the association—the extreme one whose policy is to refuse to work the act at all and the more moderate one, which, while entirely agreeing with the other as to the objects desired (the obtaining of the six points laid down by the association), thinks the best course is to endeavor to obtain them by regulations. To such a pitch is the profession roused that three organizations have been formed outside the British Medical Association—the British Medical Association Reform Committee, the National Medical Union and the Medical Federation—for the purpose of resisting the act and influencing the policy of the British Medical Association, which all parties recognize as the only body capable of speaking for the whole profession. These outside bodies held meetings on the day before the association meeting for the purpose of promoting the extreme policy. At the representative meeting the first trial of strength between the two parties took place on a motion that the chairman of the representative meetings, Dr. Maclean, "be asked to resign the chair and a more vigorous advocate of our rights be elected." As explained in previous letters, Dr. Maclean, as well as the council of the association, has been censured by the extreme party for not adopting a more vigorous policy of opposition to the government, Dr. Maclean specially for telling the representatives in answer to an appeal, that they were not simply delegates, but could vote as they thought best even in opposition to the resolutions of the divisions of the association which they represented. This was shown to be at variance with one of the by-laws of the association, which says that a representative is

bound to vote in accordance with any resolution of his division passed within three months of the representative meeting. Dr. Maclean admitted that he was in error but said that the question was sprung on him under peculiar circumstances. After a debate in which even those who supported the motion spoke in the highest terms of Dr. Maclean's services, the motion was defeated by seventy-eight votes against sixty-three. This defeat of the extreme party was the prelude to defeat of all their motions. The crux of the whole situation was their motion "that the council be instructed to inform the government and the insurance commissioners that until the minimum demands of the profession are placed beyond doubt by an amending act further negotiations will be useless." Against the alternative that the profession could obtain its demands by regulations it was urged that such regulations could be altered again at any moment. A strong speech against the motion was made by Dr. Macdonald, chairman of the council of the association. He pointed out how much easier it was to get their demands put in the form of a regulation than in the form of an amending act, which would have to pass the House of Commons. They had obtained one great point under the act—the free choice of doctor by the patient. If they now refused to work the act they would have against them the great confederation of the friendly societies which would become about three or four times as strong as they were now. These would not give free choice of doctor. At present, about 12,000 physicians were engaged in attendance on the friendly societies for a capitation fee of only about $1 per annum. Even under the meager arrangements of the act they would get 50 per cent. more, and at the same time would have three times as many men in the clubs. Could these physicians, who were to a great extent dependent on clubs, be persuaded to surrender them? The motion was defeated by eighty-one votes against fifty-eight. The second day of the meeting the extreme party brought forward another motion to inform the insurance commissioners that if an amending act embodying the six points of the association were not passed by parliament the profession would refuse to work the act. After much discussion the resolution was adopted as a compromise between the two parties "that the commissioners be informed that unless the minimum demands of the association be embodied in the regulations in such a manner as to be permanent, with a view to having the same embodied in an amending act, it is the intention of the British Medical Association to call on the profession to decline to work the act." This was carried by a vote of 159 to three. A motion of want of confidence in the council was brought forward but was not put to the vote.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 16, 1912.

Reform in Medical Instruction

With regard to the superior commission of medical instruction, the formation of which I mentioned in a previous letter (THE JOURNAL, Feb. 24, 1911, p. 568), the council of administration of the Syndicat des médecins de la Seine has just passed a resolution protesting energetically against the composition of the commission which contains no representative of the syndicats or of any professional organization whatever, provincial or Parisian. Out of twenty-four representatives only eight are practicing physicians and those physicians appointed by the minister are not appointed as official delegates of the groups to which they belong. Consequently, the commission is constituted on lines absolutely opposed to the ideas expressed by the medical profession. It corresponds in no way to the superior medical council demanded by the Congrès des praticiens, since conception of this council was based on the collaboration of the syndicats with public officials and the recent decree refuses such collaboration.

Death of Dr. Eugène Caventou

Dr. Eugène Caventou, member and former president of the Academie de medecine, section of pharmacy, since 1870, has just died, aged 88. He was the son of the chemist Caventou, whose name, in connection with that of Pelletier, is connected with the discovery of sulphate of quinin.

A New Periodical Devoted to Abnormal Infancy

The first number of a monthly review entitled *L'Enfance Anormale* has just appeared. It is published under the direction of Dr. A. Courjon and M. Louis Grandvilliers, and is devoted especially to charitable, pedagogical and med.cal aid of abnormal children.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 16, 1912.

Personal

Professor Cramer of Göttingen has refused the call to Ziehen's chair of neurology in Berlin. It is to be hoped that the next candidate on the list, Professor Bonhöffer of Breslau will accept, and thus we may be spared the annoyance in filling this chair which was experienced in connection with ophthalmology.

Dr. Otto Kahler, a privat-docent of Vienna, a son of the former director of the second medical clinic of that place, has been appointed director of the university clinic for laryngology, to succeed Professor Killian.

A bacteriologic department of the Berlin pathologic institute has been formed, and Professor Morgenroth, a pupil of Ehrlich, has been named as its director.

The Practical Year

As may be well known to your readers, there has been for some years the arrangement in Germany that before the young physician can get his license to practice, he must after he has passed his state examination spend a so-called practical year, generally in the hospitals, but sometimes in purely scientific institutions. A catalog of these institutions which are entitled by the government to receive practitioners is published yearly.

The reason of this requirement was the well grounded idea that before the young practitioner should be placed on his own feet, or, as Billroth once expressed it, let loose on the suffering public, he should get into closer touch with patients than is, as a rule, possible in the student period, especially in the great university cities.' Moreover, the spirit of professional ethics should be instilled into him under the supervision and guidance of the directors of the hospitals, and they should see that he has the necessary tact and understanding of the tasks of the practicing physician. The young physicians, who during this practical year bear the title of *Medizinalpraktikanten*, are required to furnish as evidence of their activity, the certificates of one or more directors of institutions in which they have spent the period. If this certificate is not accorded to the candidate by one or more of the directors concerned, the license to practice may be denied.

After this arrangement had been in force for several years it was demonstrated from various sources, particularly by the transactions of the medical chambers (*Aerztekammer*) that, while it was thoroughly worthy of recognition in theory, in practice it had not accomplished what had been expected of it. The directors of institutions in the larger and middle sized cities are as a rule too busy to undertake the supervision of the *Medizinalpraktikanten* with sufficient care. They leave this duty to assistant physicians, who naturally have not the necessary skill and experience and sometimes not enough goodwill for so responsible a task. At the smaller hospitals where the directors have time enough to busy themselves with the praktikants the material is not large enough to supply to the candidates the desired enlargement of their experience. As a result the praktikants as a rule prefer to remain in the large cities, particularly in the university towns where they are in a position to carry on scientific work. In addition to all this, another objection has developed. While before the institution of the practical year every young physician who had a sufficient sense of duty and the necessary time endeavored to spend one or more years as an assistant physician in a hospital, the opinion has established itself in the minds of many young physicians that the practical year is sufficient to supply their need of service as assistants. As a result there has developed a lack of assistant physicians and this again has brought about the result that the hospitals have attempted to supply this lack by the employment of praktikants, with the resulting competition for young physicians to fill these places. In this strife the victors are the institutions which offer the best inducements, and therefore the young physicians receive not only free lodging and care, but are given a fee, naturally very small, but amounting at least to $12.50 (50 marks) per month. All these difficulties have convinced the government that there is need for a change. A conference of the government and medical councillors (*Regierungs- und Medizinalräte*) has been called for the latter part of April in which some new arrangement of the conditions for the practical year is to be discussed.

[The above item is of particular interest this week in connection with the report of the discussion of the same subject at the Conference on Medical Education. See pages 723 and following.—ED.]

Reduction of the Birth-Rate in Prussia and Germany and the Campaign Against It

At its last session the scientific deputation for medical affairs in Prussia, of whose activity I have repeatedly given you accounts, discussed the following questions: Are there indications that in the constant decrease of the birth-rate in Prussia and Germany a diminution of the reproductive capacity is an etiologic factor? What measures seem suitable to oppose this evil in case it exists? On the basis of reports made by the reporting councilor Professor Dietrich and the former reporting councilor, Dr. Pistor, the scientific deputation adopted the following theses: The undoubted decrease in the birth-rate affects chiefly legitimate fertility. It is most extensive in the cities, although the number of women capable of child-bearing has increased in the cities and decreased in the country. The number of marriages has remained the same. A variation unfavorable to the portion of the population capable of reproduction and in favor of those not yet or no longer capable of reproduction has not yet taken place in consequence of the lowering of the death-rate and the increase in the length of life; on the contrary, the number of persons of reproductive age has increased. A diminution of the reproductive capacity of either sex in Prussia and Germany has not been demonstrated up to the present. The reduction of births must be referred chiefly to the voluntary limitation of the number of children. The reduction of the birth-rate appears not to be threatening in the near future in view of the compensatory reduction of the death-rate, but this will reach its natural limit. For that reason the welfare of the state and of the people demands that suitable measures to obviate the evil be thought out in due time. As questions with reference to the reproduction and preservation of the race need scientific elucidation in various directions, systematically continued official inquiries with reference to the conditions affecting the birth-rate in various strata of the population are much to be desired.

The Smoke and Soot Nuisance

At the same session the Wissenschaftliche Deputation für das Medizinalwesen in Preussen also voiced its opinion with reference to the smoke nuisance and the campaign against it. The deputation arrived at the following conclusions: The excessive production of smoke and soot is detrimental to human health. To what extent this injury to health occurs by the production of smoke and soot must be determined by comprehensive investigation of an experimental and statistical character. The official medical authorities should stimulate the hygienic institutes to research in this line. The measures of a legislative nature with reference to the smoke question hitherto promulgated have been directed only against the locally occurring smoke contamination. These measures in future should be energetically continued and increased in rigor. In addition there is need to combat the very considerable part of the diffused smoke nuisance of the large cities, which is due to domestic fires, by instruction of the people by means of circulars and by suitable instruction in schools for girls and in domestic science courses. In this connection it is important to emphasize the great advantage of cooking by gas and of central heating, as well as the use of fuel producing little smoke and the proper care of stoves. As the activity of societies and commissions for combating the smoke nuisance in various cities has given good service, the formation of such unions or commisions in other cities suffering from the smoke nuisance should be encouraged. For the uniform conduct of the campaign against smoke as well as for more extensive information as to the extent and cause of the smoke nuisance in large cities, there is need of constant cooperation of the officials for trade supervision and of the police authorities with the district physicians.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Feb. 10, 1912.

The Austrian Government Obtains the Practical Monopoly on the Sale of Radium

An official report announces that the government has bought up all the mines of Joachimsthal (Bohemia), where radium is present. Extensive investigations by experts have shown that it will be possible to obtain per year from these mines at least a ton of uranium ore, equivalent to 3 gm. of radium, valued at $240,000. Together with the production of the other state mines, the yearly output of this precious substance will amount to 5 gm. and Austria will monopolize in reality the sale of radium; the mines in California, in Spain and in Saxony cannot compete with the Austrian. The bulk of the year's output will be handed over to the Radium Institute in Vienna, which will use it for extensive experiments. A large quantity will be disposed of to hospitals, and the surgical clinics in Vienna will soon possess the largest quantity possessed by any charitable institution in the world. Small quantities will be sold to physicians and scientists, mostly as radium salts. The mines were bought for nearly $500,000. The cost of "manufacturing" 1 gm. of radium is very low (only $4,000), while the by-products are very valuable, for nearly 6,000 pounds of uranium colors are obtained in the process of separating 1 gm. radium. This uranium is valued at $20,000. Thus the government has no doubt made a very good bargain, and it may easily place large quantities of the precious material at the disposal of clinical teachers for the benefit of the diseased poor.

Proposed Reform of the Medical Curriculum

The methods of instruction of medical students, as well as the entire system of study in force at present, does not find much favor with the students in this country. They complain that too much time is devoted to purely theoretical subjects of minor importance, while the actually important practical service of the student, the clinical instruction, is too superficial. The examinations are also, in the opinion of the students, not satisfactory because they do not at all furnish a proof of the real knowledge of a candidate. What is really wanted is an examination by the professor without any time limit—which has hitherto been fifteen minutes for each candidate—and at the bedside not only on one case but on a series of cases. The students have formulated their wishes in a memorandum and delivered it to the ministry of education. They want to be allowed to pass their first theoretical and practical examination (on biology) at the beginning of the second year of the curriculum, and to spend four years in clinical wards instead of three as at present. Instruction in serology, otology and physical therapeutics should be compulsory, and examinations more practical and searching and not simply a matter of a few minutes. A hospital year should be made obligatory before granting the diploma of M.D. It is not often the case that students themselves ask for heavier and increased regulations of their duties, and nothing but the well-considered needs of their profession have prompted them to do so. There is reason to believe that these wishes will be fulfilled in a short time.

Marriages

THOMAS B. MCCLINTIC, M.D., U. S. P. H. and M.-H. S., to Miss Theresa E. Drexel of Washington, D. C., March 2.

GEORGE WILLIAM SHIPP, M.D., Newton, N. C., to Miss Bessie May Reid of Baltimore, January 17.

FRANCIS V. CARDEN, M.D., Coatesville, Pa., to Miss Anna Brennan of Harrisburg, Pa., February 20.

DAVID TREADWELL BISHOP, M.D., to Miss May Constance Shelley, both of Brooklyn, February 12.

SMITH MCMULLIN, M.D., Berkeley, Cal., to Mrs. Laura Q. Wilson of Petaluma, Cal., February 18.

SIDNEY L. FELDSTEIN, M.D., to Miss Carrie Blumenthal, both of Philadelphia, February 22.

JOHN R. HALL, M.D., Napton, Mo., to Miss Ferda Roberts of Boonville, Mo., February 11.

Deaths

John Goodman, M.D. Tulane University, New Orleans, 1859; one of the founders of Louisville Medical College, later demonstrator of anatomy in the Kentucky School of Medicine; professor of obstetrics in the University of Louisville, and for a quarter century physician to the Louisville Industrial Home for Reform; one of the original members of the American Gynecological Society; one of the organizers and first members of the Louisville Board of Health; died at his home in Louisville, February 19, from arteriosclerosis, aged 74. Physicians of Louisville served as honorary and active pallbearers.

Thomas Chalmers Minor, M.D. Medical College of Ohio, Cincinnati, 1867; a member of the Cincinnati Board of Health and health officer in 1878-1879; for six years a member of the

board of trustees of the University of Cincinnati and for a similar period police examiner; chief examining physician of the police and fire departments of Cincinnati since 1907; at one time a member of the board of education; who is said to have established the first quarantine against yellow fever while health officer of Cincinnati in 1878; died at his home, February 18, from pneumonia, aged 65.

Asa Brainerd Isham, M.D. Medical College of Ohio, Cincinnati, 1869; a member of the American Medical Association; from 1876 to 1880 professor of materia medica and therapeutics in the Cincinnati College of Medicine and Surgery; president and for many years a member of the board of directors of the Cincinnati Hospital; state commander of the Military Order of the Loyal Legion of the United States; died at his home in Cincinnati, February 20, from cerebral hemorrhage, aged 67.

Adam Guthrie, M.D. University of Arkansas, Little Rock, 1893; a member of the American Medical Association and president of the state medical board of the Arkansas Medical Society; at one time professor of materia medica, therapeutics and hygiene in the University of Arkansas and visiting physician to the Logan H. Root Hospital, Little Rock; died at his home in Prescott, Ark., February 15, from cerebral hemorrhage, aged 49.

Henry Sampson Isaacs, M.D. Western Pennsylvania Medical College, Pittsburgh, 1903; a member of the Medical Society of the State of Pennsylvania; formerly of Braddock but for two months a resident of Denver, Colo.; died in that city, February 19, as the result of injuries received two days before in a collision between a street car on which he was riding and a hosewagon of the Denver Fire Department, aged 31.

Robert C. White, M.D. University of Louisville (Ky.) 1853; acting assistant surgeon U. S. P. H. and M.-H. Service, in charge of the Pensacola (Fla.) Station; port physician of Pensacola since 1885; a member of the Association of Military Surgeons of the United States; died at his home in Pensacola, February 15, after a protracted illness due to influenza, aged 70.

William T. W. Dickeson, M.D. University of Pennsylvania, 1849; a member of the Medical Society of the State of Pennsylvania; surgeon of the Ninety-Ninth Pennsylvania Volunteer Infantry and of the Fourth Pennsylvania Reserves during the Civil War; the oldest practitioner of Media; died at his home, February 21, from senile debility, aged 85.

Leander Rankin Webster, M.D. New York University, New York City, 1864; formerly assistant surgeon U. S. Army; a member of the American Medical Association; for twelve years a practitioner of Grass Valley, Cal., and for twenty-five years a resident of Oakland; died at his home, February 18, from heart disease, aged 75.

Alexander Cook Major, M.D. Washington University, St. Louis, 1885; formerly local surgeon of the Kansas City Southern Railway at Anderson, Mo., and from 1892 to 1894 second assistant surgeon at the Soldiers' Home, Milwaukee, Wis.; died at his home in Excelsior Springs, Mo., February 14, from pneumonia, aged 49.

Edward Bernard Mathiot, M.D. Jefferson Medical College, 1882; a member of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat, of Pittsburgh; for several years a member of the staff of the South Side Hospital; died at his home, February 20, from pneumonia, aged 50.

George Denison Whedon, M.D. Albany (N. Y.) Medical College, 1853; Surgeon of the Twelfth New York Volunteer Cavalry from 1861 to 1862 and later in charge of the field hospital near Stafford, Va.; for many years a practitioner of Syracuse, N. Y., died at his home, February 13, from uremia, aged 79.

Oscar Porser, M.D. College of Physicians and Surgeons, Baltimore, 1906; of Bloomfield, N. J.; a veterinarian in the Army during the Spanish-American War; died in the German Hospital, Newark, N. J., from malignant disease of the jaw due to the kick of a horse fourteen years before, aged 41.

Albert Aurelius Hornor, M.D. University of Pennsylvania, Philadelphia, 1854; a member of the American Medical Association; a pioneer practitioner of Helena, Ark.; surgeon of Hindman's Legion, C. S. A., throughout the Civil War; died at his home, February 21, from senile debility, aged 80.

Morton Leon Hunt, M.D. Rush Medical College, 1906; formerly a member of the American Medical Association; formerly of Akron, Ohio, an.. anesthetist to the Akron City Hospital; died at his home in Winchester, Ind., February 21, from septicemia due to an operation wound, aged 31.

Raymond Sorber Moyer, M.D. Medico-Chirurgical College, Philadelphia, 1909; a member of the Medical Society of the State of Pennsylvania; of East Mauch Chunk; died in the Palmerton (Pa.) Hospital, February 16, from peritonitis following an attack of appendicitis, aged 23.

Patrick H. Harriman, M.D. New York University, New York City, 1884; a member of the American Medical Association and a well-known practitioner of Norwich, Conn.; died in the General Memorial Hospital, New York City, February 17, after a surgical operation, aged 51.

Wesley A. Daniel, M.D. Rush Medical College, 1853; surgeon of the Twenty-Fourth Iowa Volunteer Infantry; a practitioner of Tama County (Iowa) for fifty-nine years; and first surveyor of the county; died at his home in Traer, February 8, from senile debility, aged 86.

Frederick B. Lawson, M.D. Berkshire Medical College, Pittsfield, Mass., 1865; surgeon in the Navy during the Civil War; for thirty years a practitioner of New York City and then for ten years a resident of Boston; died at his home in Acushnet, Mass., February 19, aged 72.

Thomas Robert Dougher, M.D. University of Maryland, Baltimore, 1909; of Avoca, Pa.; for many years a member of the staff of Pittston Hospital; died at his home, February 16, from meningitis following an attack of pneumonia, aged 27.

Edwin L. Smith, M.D. Rush Medical College, 1884; a member of the American Medical Association and for twenty-eight years a resident of Shelton, Neb.; died in a sanatorium in Kansas City, Mo., February 28, from nephritis, aged 64.

John Theodore Scholl, M.D. Washington University, St. Louis, 1858; a practitioner of Port Washington, Wis., until 1883, and thereafter of Los Angeles; died at his home, February 15, from senile debility, aged 78.

Robert Patterson, M.D. Trinity Medical College, Toronto, Ontario, 1880; a pioneer practitioner of Clay County, Minn., and a resident of Barnesville; died in Biloxi, Miss., February 16, from cerebral hemorrhage, aged 60.

Fred Nelson Burnett, M.D. Long Island College Hospital, Brooklyn, 1892; formerly of Webster and Attleboro, Mass.; died suddenly at his home in Dorchester, Boston, February 20, from valvular heart disease, aged 51.

Eugene Warren Martin, M.D. Rush Medical College, 1897; formerly of Jewell, Ia.; third assistant physician in the Cherokee State Hospital; died at Cherokee, February 9, from cerebral hemorrhage, aged 42.

Ransom Tiffany Gates, M.D. Geneva (N. Y.) Medical College, 1867; a member of the Medical Society of the State of New York; died at his home in Newark Valley, January 7, from erysipelas, aged 89.

Hermann Wichmann, M.D. Humboldt Medical College, St. Louis, 1862; a member of the staff of Lutheran Hospital, St. Louis; died at his home in South St. Louis, January 23, from angina pectoris, aged 69.

William Guy Wren, M.D. Medical School of Maine, Brunswick, 1896; a colored physician of Columbus; formerly surgeon of the Ninth Battalion, N. G. Ohio; died at his home, February 14, aged 40.

Samuel Douglass Gillespie, M.D. University of the South, Sewanee, Tenn., 1908; of Vidalia, La.; was found unconscious near his office, February 15, and died a few hours later, from heart disease, aged 27.

Edwin Glover Morey, M.D. Chicago Homeopathic Medical College, 1886; formerly of Rock Island and Oak Park, Ill.; died in Florida recently from influenza and was buried at Rock Island, February 16.

John D. W. Henderson, M.D. Jefferson Medical College, 1867; of Philadelphia; a veteran of the Civil War; died in the Presbyterian Hospital, Philadelphia, February 13, from heart disease, aged 72.

Francis Joseph Durocher, M.D. Detroit (Mich.) College of Medicine, 1901; health officer of Ecorse village and township, Michigan; died at his home, February 8, from acute bronchitis, aged 38.

John Melvin Lamb, M.D. College University, Washington, D. C., 1884; for twenty-five years professor of physiology in his alma mater; died at his home in Washington, February 21, aged 49.

James H. Hudson, M.D. Vanderbilt University, Nashville, Tenn., 1883; of Boonshill, Tenn.; died in an infirmary in Nashville recently and was buried at Boonshill, January 29.

James H. Hatch, M.D. Medical College of Virginia, Richmond, 1857; a Confederate veteran; died at his home near Beaver Dam, Va., February 10, from paralysis, aged 79.

Riley Jackson Butts, M.D. Vanderbilt University, Nashville, Tenn., 1895; a member of the Arkansas Medical Society; died at his home in Altus, February 18, aged 55.

William C. Sprinkle, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1879; died at his home in Shelbina, Mo., February 19, from pneumonia, aged 62.

Oscar Whitfield, M.D. University of Tennessee, Nashville, 1880; died suddenly at his home in Birmingham, Ala., February 11, from angina pectoris, aged 52.

Carl F. G. Bergner (license, Berks County, Pa.); a practitioner of Reading for nearly half a century; died at his home February 15, from pneumonia, aged 73.

Humphreys W. Beaty, M.D. Memphis (Tenn.) Medical College, 1907, of Binghampton, Tenn.; died in St. Joseph's Hospital, Memphis, February 11, aged 34.

George Wylie Rae, M.D. Trinity Medical College, Toronto, 1875; formerly of Bradford, Pa.; died in the Warren (Pa.) Hospital for the Insane, February 13.

Robert Anderson Hamill, M.D. College of Medicine of the University of Nebraska, Lincoln, 1907; of Chapman, Neb.; died in Denver, February 8, aged 32.

Tancrede Fontaine, M.D. Laval University, Montreal, 1900; died at his home in Black Lake, Que., January 8, from musculo-respiratory paralysis, aged 37.

David P. Shie, M.D. Kentucky School of Medicine, Louisville, 1892; died at his office in Orlville, Ohio, February 6, from cerebral hemorrhage, aged 49.

Clinton G. Cooley, M.D. Albany (N. Y.) Medical College, 1884; of Montgomery, N. Y.; died at the home of his brother, near Pine Bush, N. Y., aged 56.

Alice C. Bellows, M.D. Bennett Medical College, Chicago, 1895; died at her home in Chicago, February 14, from chronic interstitial nephritis, aged 50.

George A. Knox, M.D. Eclectic Medical Institute, Cincinnati, 1894; was found dead in his office in Pittsburgh, February 7, from heart disease, aged 38.

Stafford L. Parker, M.D. University of Louisville (Ky.) 1864; died at his home in Athens, Ky., February 13, from heart disease, aged 73.

John Wellington Morton, M.D. Rush Medical College, 1877; died at his home in Ann Arbor, Mich., February 15, from heart disease, aged 66.

Daniel H. Bailey, M.D. Medical College of Ohio, Cincinnati, 1876; of Denison, Texas; died in Terrell, Tex., Dec. 30, 1911, from paresis, aged 51.

Elmer Ellsworth Fuller, M.D. Hahnemann Medical College, Philadelphia, 1893; died at his home in Plymouth, Mass., February 6, aged 49.

Isaac J. Lane, M.D. Queen's University, Kingston, Ont., 1886; died at his home in Edmonton, Ont., Dec. 14, 1911, from nephritis, aged 62.

Richard H. Ely, M.D. Jefferson Medical College, 1882; died at his home in Hawley, Pa., February 20, from cerebral hemorrhage, aged 74.

William Smith, L.R.C.P. & S. Edinburgh, Scotland, 1889; formerly of Kirksville, Mo.; died recently in Dundee, Scotland.

James Gerrie, M.D. New York Homeopathic Medical College, 1868; died at his home in Brooklyn, February 19, aged 75.

Sucher Drosdowitz (license, Illinois, 1892); died at his home in Chicago, February 21, from angina pectoris, aged 54.

Association News

FUND TO PROMOTE RESEARCH

The Committee on Scientific Research of the American Medical Association has charge of a small fund which is to be used to promote research. The committee is desirous that this money should be used to meet actual needs and to promote investigative work not otherwise adequately provided for. Applications for grants are invited. The applicant should state fully the purpose for which the grant is desired, the qualifications of the applicant and the general opportunities and conditions under which the work is to be done.

The members of the committee are Drs. Ludvig Hektoen, Chicago (1743 West Harrison street), Graham Lusk, New York, and Eugene L. Opie, St. Louis.

THE SCIENTIFIC EXHIBIT FOR 1912

The fact that the first official scientific exhibit of the Association was held in Atlantic City will naturally lead to comparisons of the present with the first effort. To this end it behooves us to make such a creditable showing at the coming meeting that the comparison will be indicative of progress. That the exhibit of 1912 will exceed the preceding efforts both in size and in points of excellence is already assured. The East has always responded most liberally when the meetings have been held in that region, and the present indications point to patronage even beyond that previously accorded. From the city of Washington alone six distinct exhibits have already been promised. These prospects show the necessity of more ample quarters than were provided in 1909. It will be gratifying to prospective exhibitors to learn that the Committee on Arrangements has promised at least double the floor space provided three years ago, besides facilities for microscopic and lantern demonstrations.

To prospective contributors it may be stated that exhibits relating to any of the fundamental branches of medicine (anatomy, physiology, chemistry, pathology, etc.), as well as those related to the so-called practical fields, will be highly acceptable. Anything and everything is to be encouraged which sets forth in graphic manner the progress for which the Association stands. Primarily such exhibits are for the instruction of the large number of practitioners attending the meetings; secondarily, they proclaim to the medical world the progressiveness of the institutions and the men presenting them.

Exhibits in series are, generally speaking, preferable to heterogeneous collections. Persons preparing exhibits are urged to do so with a view to making a formal demonstration of them at a time which the committee will be pleased to designate on the program. It is designed to make the demonstrations at the coming meeting a conspicuous feature. They will include gross, lantern and microscopic presentations; emphasizing research problems and methods in diagnosis; illustrating advancement made in the different departments of medicine; showing newer methods in preventive medicine, hospital construction, management, etc., etc. Those expecting to participate should inform the director as to the scope and character of demonstration.

Reference to one of the demonstrations already arranged for will give an idea of the plan which we are trying to realize. The entire subject of syphilis will be illuminated. One very eminent authority will present the laboratory and experimental phases; others will show by photographs and specimens the cutaneous, visceral and bone lesions of the disease. It will be an exceptional privilege to the many attending the meeting to be able to see pure cultures of the *Spirochæta pallida* and other spirochetes, the living motile organisms by dark-field illumination, inoculated animals, and the luetin test; these features will certainly interest a great many.

Awards to exhibitors will be made as follows:

1. *Certificates of Honor.* These will be given to a few of those presenting exhibits of distinctively superior merit.
2. *A Gold Medal.* This and fifty dollars, or a hundred dollars, will be given for the best research exhibit relating to any of the fundamental branches of medicine.
3. *Gold Medal for Best General Exhibit.* Consideration will be given to the scope, excellence of material presented, care in preparation, and value as an instructive educational exhibit.
4. *Cartoon Exhibit.* Through the Council on Health and Public Instruction two cash awards are offered, of $200 and $100, respectively, for the first and second best series of six cartoons on the following health subjects:

A. Cartoons dealing with public health questions.
   (a) Public water- and milk-supply.
   (b) The health of the people versus the health of domestic animals, trees, grain, etc.

B. Cartoons on the nostrum business and quackery.

Notification of intention to participate in the Cartoon Contest should be sent at the earliest possible moment to the Director of the Exhibit, Dr. Frank B. Wynn, 311 Newton Claypool Building, Indianapolis.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

THOREMEDIN

A Typical Nostrum Put Out Under the Honored Name of Squibb

WILLIAM ALLEN PUSEY, M.D.
CHICAGO

In September, 1911, E. R. Squibb and Sons published (in *Squibb's Memoranda for the Medical Profession*) the "first comprehensive report regarding Thoradin which in the hands of Dr. Bulkley and other eminent dermatologists, both here and abroad, has proved a remarkably efficient and safe remedy for Epithelioma, Lupus, Nevi, Pustules (?), Angiomata, Verrucæ, Moles, Chronic Eczema, Acne, Etc." In passing, it may be said that in this report, aside from Dr. Bulkley, there were no "eminent dermatologists" whose names were familiar to me. In January they issued another report on the same remarkable agent, but this time under the name Thoremedin, because "since our previous report in which the *new* remedy was called Thoradin, we have learned that an entirely different article is offered under a similar name."

The reports do not specifically assert that the therapeutic efficacy of the remarkable "new remedy" is due to its radio-activity, but certainly they do not suggest that it is an old chemical caustic, and the implication is clear from the context that its efficacy is at least bound up with "radio-active Thorium." First, there is the radiant-energy suggestion of the name Thoradin—name surrendered under trade necessity—with its combination of the roots of thorium and—that element of the mysterious powers—radium. Then again, "Thoremedin (the name given to the Thorium Remedy) consists of *radio-active* Thorium in combination, etc." Note in this connection that it is specifically a "Thorium Remedy"—in capital letters. Further, "in some cases it [Pasta Thoremedin.—W. A. P.] *alone* produces the same results as an operation and postoperative *radium* treatment *combined*." Still further, "Pasta Thoremedin affords an excellent substitute for the *x*-rays in postoperative treatment of neoplasms . . ." Of course, suggestion of the radio-active efficacy of this remedy could go little further than the last two sentences offering it as a substitute for radium and *x*-rays for postoperative therapeutic purposes.

On the other hand, as suggestive that it is not simply a chemical treatment these sentences suffice: "Its destructive power can be entirely controlled . . .; a thing that cannot be done in the case of . . ., *concentrated mineral acid* . . ." And ". . . most of the cases thus far treated have been chronic where prolonged *chemical treatment* and even surgical operation had been of no avail."

THE IMPOSING CONTAINER

As a final indication of the mysterious potency and dearness of the remedy the container of Pasta Thoremedin is, I think, an interesting study. First, there is a handsome round screw-top aluminum box; within there are two little glass rods and two little glass spatulas; then a strip or two of fire-resisting asbestos, lining the sides of the box; and finally—oh mystery!—one comes to a little two- or three-dram glass-stoppered bottle with its precious contents of a teaspoonful of the Pasta, or, in the vernacular, paste. Surely here is a precious and powerful agent. As examination will show, the bottle would as well be packed in a handful of sawdust.

With the report of the new remedy came, from Europe presumably, one C. B. Semerak, to me unknown, who has "decided to remain permanently in the United States"—address, care Squibb—and give instruction and advice concerning his remedy. In the January report he modestly admits having received, in addition to "a large number of records of good results from its use," "a few adverse criticisms," "but in each case careful investigation proved that the difficulty was due to a faulty technic rather than to Thoremedin itself or to my method of applying it." And "in my experience, covering eight years of observation in the use of Thoremedin in various hospitals and of treatment of many hundreds of patients, including cases of lupus, epitheliomata, angiomata, moles, verrucæ, etc., I have not found more than from 3 to 4 per cent. fall short of a good result. These failures were all cases of epitheliomata in which the deep tissues were infiltrated and for which a surgical operation should have preceded the use of Thoremedin." (Here the suggestion of the post-operative use of Thoremedin bobs up again). In short the remedy has proved, in a long experience of Mr. Semerak's—he is not a physician—without failures in various formidable skin lesions, including lupus and angioma, and almost infallible in epithelioma.

WHAT IS IT?

What is this wonderful remedy with such claims and sponsored by the great firm of Squibb? Exactly, we are not told. It "consists of radio-active Thorium in combination with didymium, lead and sulphuric acid. . . . To state at this time the exact quantity in which each ingredient is present would add nothing of practical value to the physician, but . . ."—the well-worn reason of proprietaries.

What the use of didymium is in this mixture we can only surmise. It has no known value as a local therapeutic agent and is not classified among the radio-active elements. My own surmise is that it is the old expedient of adding something rare and unfamiliar for mystery's sake.

The thorium practically falls in the same class. It has no known therapeutic uses. Its radio-activity is about the same as that of uranium—about one two-millionth part of that of radium. If Thoremedin Paste were saturated with thorium, it would be as useful therapeutically on account of its radiant energy as a paste made of powdered Welsbach mantles.

Nevertheless it seemed desirable to determine the radio-activity of Thoremedin Paste, and Prof. Henry Gale and Mr. L. J. Lassalle, of the University of Chicago, kindly made the determination for me. The material for this examination and for all of my other tests of Thoremedin were obtained from a package of Thoremedin Paste which I purchased unbroken from a local druggist. This sample of Pasta Thoremedin was found to have about one-fortieth the radio-activity of thorium nitrate in a fine powder and one-fourth the radio-activity of a paste which I had made up containing 10 per cent. thorium nitrate with 33 per cent. sulphuric acid and 57 per cent. lead sulphate. In other words, it has a content of radio-active material equivalent to 2.5 per cent. thorium and has a radio-activity of one eighty-millionth part of that of radium bromid.

A COMPARISON

In order to get some idea of what this means it is interesting to compare for a moment its possible therapeutic application with that of radium, whose remarkable therapeutic uses have given rise to these various "radio-active" remedies. Let us assume that an epithelioma the size of a finger-nail will be cured by an application of 10 mg. of radium bromid for ten minutes—an assumption far short of actual practice with radium. On the same basis, to cure the epithelioma with the radiant energy from the same quantity of Thoremedin would require 80,000,000 times ten minutes, or over 13,000,000 hours—a good deal more than 1,400 years. And if the patient could not wait 1,400 years for a cure, and wished to apply a quantity of radiant energy in the form of Thoremedin Paste equal to that of 10 mg. of radium bromid, he would have to use 80,000,000 times 10 mg., or 800,000 gm.; i. e., almost a ton. Or if instead of applying 1,800 pounds—say a barrelful—of Thoremedin Paste for ten minutes, he wanted to reduce the quantity and increase the time of application to, say five hours, he would still have to use 60 pounds of Thoremedin Paste; and 60 pounds of Thoremedin Paste would eat the face off a graven image in five hours.

In view of its entire lack of any effective amount of radiant energy, I have no doubt whatever that radio-activity plays not the slightest part in the therapeutic action of Thoremedin.

1. The italics given in the quotations throughout the article are for the most part mine.—W. A. P.

What then is the active ingredient in this "new Thorium remedy"? Since the published report included sulphuric acid, I concluded it could only be sulphuric acid, but I was surprised when Professor Puckner, director of the Chemical Laboratory of the American Medical Association, notified me that it contained more than 35 per cent. by weight of free sulphuric acid, U. S. P. According to the analysis[2] of the Association Laboratory, which was carried out on a specimen labeled "Thoradin," which, according to the exploiters, is identical with "Thoremedin," the product contains approximately 35.6 per cent. of free sulphuric acid, U. S. P., and 62.7 per cent. of solids—to make a paste—nearly all of which is lead sulphate. Its radio-activity indicates less than 2.5 per cent. of thorium.

A SULPHURIC ACID PASTE

Here is a radio-active remedy with a vengeance—a "new Thorium remedy" for local application containing 35 per cent. by weight of free sulphuric acid and more than 60 per cent. of almost inert, insoluble sulphates to make it into a paste. It does not make much difference what else it contains beside 35 per cent. free sulphuric acid. The only part played by the solid ingredients is to hold the acid mechanically so that it will not all be free at once to attack tissues. As a matter of fact, the paste is so full of sulphuric acid that some of it separates as free liquid, and the directions advise careful mixing before application; otherwise one might readily apply

Fig. 1.—Effects of Thoremedin Paste and of 32 per cent. sulphuric acid paste left over night on chamois skin and paper. P indicates hole made by my paste (32 per cent. sulphuric acid) on chamois skin; T indicates hole made by Thoremedin Paste on chamois skin; T.a indicates hole made by Thoremedin on paper after eating the hole in chamois skin. Half natural size.

liquid sulphuric acid—which, as a matter of fact, would not be much more active. The 35 per cent. free sulphuric acid in such a mixture will kill any living cells with which it comes in contact so quickly that no other therapeutic agent will have time to affect them. Only fire can easily beat sulphuric acid in quickness of destruction of living tissues. If we had enough pure radium sulphate to make a thick paste with 35 per cent. sulphuric acid, the sulphuric acid would kill tissues so rapidly that there would be no time for the radium to produce any effect on the tissues to which the paste was directly applied.

According to *Squibb's Memoranda*, "the manufacture of Thoremedin is by no means simple; on the contrary the product is difficult to produce in a perfected and satisfactory state." I made a paste of practically the same physical characteristics as Thoremedin Paste by the following formula:

Sulphuric acid	32 per cent.
Calcium sulphate	12 per cent.
Thorium nitrate	4 per cent.
Lead sulphate	52 per cent.

In this I used 10 per cent. calcium sulphate—plaster of Paris—because my lead sulphate was not in the form of a sufficiently light powder to give the same consistency as Thoremedin with the same percentage of lead sulphate. I believe it might just as well be all gypsum or all lead sulphate. The only essential thing, in order to get a paste that will destroy tissues in the same way, is to mix sulphuric acid with an insoluble powder into a thick paste, with just enough sulphuric acid to have a small excess free—not held by the powder. Of course the only powders practically available for this purpose are lead, barium and calcium sulphates; no other familiar powder is insoluble in sulphuric acid. The only apparatus necessary to make my paste is a pestle and mortar, a pair of scales and a vial or two; and, aside from the thorium nitrate, which costs about 50 cents an ounce and is a useless ingredient, the cost is a few cents.

The action of my paste and of Thoremedin Paste were practically identical on sheet lead, sheet aluminum, chamois skin, and the skin of my arm, and I have no doubt that the therapeutic efficacy of my sulphuric acid paste would be fully equal to that of Thoremedin Paste—but I would not recommend my paste for any therapeutic purpose; sulphuric acid is not gen-

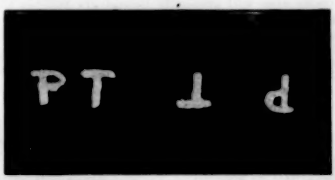

Fig. 2.—Sheet aluminum etched by Thoremedin Paste and a 32 per cent. sulphuric acid paste. The letters P were etched by my paste (32 per cent. sulphuric acid); the letters T, by Thoremedin Paste. One-quarter natural size.

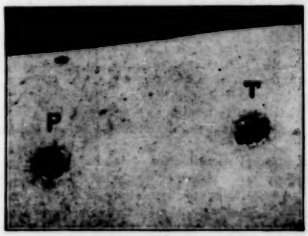

Fig. 3.—Sloughs produced on my arm by Thoremedin Paste and 32 per cent. sulphuric acid paste, respectively. Application of forty minutes. P indicates ulcer made by paste (32 per cent. sulphuric acid); T, ulcer from Thoremedin Paste. Three-quarter natural size. This picture was taken two hours after application.

erally a favorite escharotic among dermatologists. Thoremedin Paste will etch lead and aluminum. A piece of it, the size of a hazel-nut kernel, was left in a fold of chamois skin; when I examined it fifteen hours later it had eaten a hole the size of a silver half-dollar through the chamois skin, eaten a smaller hole through a sheet of paper underneath and etched a sheet of aluminum lying beneath that. I applied a drop of the well-mixed paste, the size of the end of a slate-pencil, to my forearm, and a moment later a similar drop of my 32 per cent. sulphuric acid paste. The effects of the two were identical. They were the effects of sulphuric acid—somewhat less intense than that of pure sulphuric acid. In a few seconds the familiar burning sensation of a strong mineral acid began; this continued during the application of the paste. A hyperemic halo soon developed around the sites of application. Forty minutes after applying the pastes, I removed them; over the area covered by either paste the skin was yellowish white, bloodless, apparently depressed and evidently dead; around this central area was a slightly elevated white edema-

2. The analysis follows this article.

tous collar one-sixteenth or one-thirty-second of an inch wide; and around the whole there was a pink erythema fading out gradually into normal color at about three-quarters of an inch from the central lesion. The effects were identical in character with those produced by the application of sulphuric acid. The burning sensation ceased in about twenty minutes after removal of the pastes and at the same time in both lesions, leaving in both a feeling of soreness. At the next observations, twelve hours later, both lesions showed a yellowish-white area of necrotic skin, corresponding to the sites of application of the pastes, surrounded by a narrow inflammatory border. Now, six days after the applications, each lesion shows a dry yellow necrotic center corresponding to the areas of application of the pastes, surrounded by a narrow inflammatory border. These lesions are not abrasions of the skin. They are sloughs going through the epidermis and well down into the connective tissue structure of the skin. The two sloughs show no differences in degree or other characteristic. There have been exhibited no variations between my paste and Thoremedin Paste in any of the experiments I made with them. Doubtless the future course of either lesion will be as follows: The necrotic area will gradually form a dry eschar, which in the course of about four weeks will separate, leaving a depressed scar.

THERAPEUTIC CLAIMS

What, now, are the action and therapeutic applications suggested for this "new Thorium Remedy"? The following statements are all taken from a section referring to the action of "Pasta Thoremedin". *"According to the quality applied,* its effects are antiseptic, disinfectant, dermatostimulant, epidermoplastic, and escharotic."

It is antiseptic; free sulphuric acid will destroy any living cell—bacterial or other—with which it comes in contact. In effectiveness and in freedom from selectiveness in action it compares in this respect with fire.

By the same token it is a disinfectant; it will destroy a garbage-heap as effectively as a garbage-burner—and the garbage can as well.

It is a dermatostimulant—if its application is measured in seconds. In rapidity of action it almost compares in this respect with the actual cautery. But as a dermatostimulant I venture to believe it is useless.

That it is, even theoretically, an epidermoplastic agent—assuming that term to mean an agent promoting the formation of horny epidermis over a denuded surface—I believe is not true.

It is an escharotic; with that claim I can make no quarrel. It will destroy any animal or vegetable tissue and all other substances except those of the strongest chemical resistance. It is an escharotic due to free sulphuric acid, and I believe I correctly state the position of most dermatologists when I say that sulphuric acid as an escharotic for therapeutic purposes has been long since discarded for various reasons in favor of less drastic and equally effective agents.

Again: "It also induces a strong inhibitive action on the formation of pathogenic cells." It will do more; it will kill any living cell, normal or "pathogenic," with which it comes in contact—skin, muscle, nerve, fascia, horn, or bone; it knows no selection in its destruction of animal cells.

And again: "Its destructive power can be entirely controlled by the physician in every respect; a thing that cannot be done in the case of arsenic, *concentrated mineral acid,*" [Heaven save the mark!] "and strong alkalies.' Its destructive action can be controlled; in one way, for example, by the application of an excess of water—so can a fire's. The statement that its action is more easily controlled than that of the other caustics enumerated is, I believe, not true.

Again: "Moreover, it is considerably more powerful than silver nitrate and other similar substances, while its toxicity is nil." It is more powerful than silver nitrate; in destructiveness to tissue silver nitrate compares with it somewhat in the same way that a road-scraper does with a steam shovel.

It is non-toxic, because it immediately surrounds itself with a wall of dead tissues that prevents absorption. So is arsenious acid over areas as large as the maximum recommended for Thoremedin if used in a paste sufficiently strong to destroy tissue quickly.

What are some of the conditions for which Thoremedin or Thoradin Paste is recommended? "Skin epithelioma [no qualifications.—W. A. P.] lupus (vulgaris and erythemat.), papules, cysts, moles, molluscum, nevi and angiomata. Apply Pasta Thoremedin, etc."

In all the foregoing list, moles are the only lesions for which such a caustic paste is perhaps as good a method of treatment as ordinary methods in use, and even in them I believe it falls far below recognized methods.

Of course the recommendation in "papules," "cysts," and "molluscum" is too indefinite to be analyzed. "Papules" mean small solid elevations in the skin, such as for example, the beginning eruption of small-pox, and I suppose neither Squibb nor Semerak intends to recommend Pasta Thoremedin for that condition, and yet such a use would not be more ignorant or mischievous than the use of Pasta Thoremedin in many other papular eruptions.

Imagine, in this year of our Lord, 1912, recommending a sulphuric acid caustic paste as a method of election for the treatment of cysts in the skin—a large sebaceous cyst for example! Could anything be cruder?

A VICIOUS RECOMMENDATION

Stronger criticism can be made against the recommendation of it in "nevi and angiomata" without qualification. Some flat nevi might be so treated with fair results, but what scarring will follow and how great will be the disfigurement from the use of such a treatment in large angiomata? How much danger will there be of hemorrhage from the sloughing of even a small cavernous angioma to which a 35 per cent. sulphuric acid paste has been applied? What man who knew what he was doing would go off and leave a paste, containing a large quantity of free sulphuric acid, over a mass of cavernous angioma to eat its way until the acid had neutralized itself?

To recommend a 35 per cent. sulphuric acid paste in erythematous lupus is as bad. If I should use such a method of treatment in that condition, I should regard myself as deserving a charge of malpractice.

We have seen that Mr. Semerak has said over his signature that in "many hundreds of patients, including cases of lupus . . . I have not found more than from 3 to 4 per cent. fall short of a good result. These failures were all cases of epitheliomata . . ." That is tantamount to saying that he has had no failures in his attempts to treat lupus. Presumably he means lupus vulgaris, but whether he means lupus vulgaris or lupus erythematosus, the statement is worthy of no more consideration than a claim to have an invariably successful treatment for pneumonia or typhoid fever. That the treatment is one that would compare in efficiency with methods now in use in lupus vulgaris is not, in my opinion, worthy of discussion.

That the paste can be used to destroy many epitheliomata I do not doubt, but that it has any superiority over "arsenic, concentrated mineral acids, and strong alkalies" I do not believe. Sulphuric acid is not new as a caustic, and as a result of long experience dermatologists who use caustics have for the most part come to the conclusion that the preferable ones for use in epithelioma are arsenious acid, chlorid of zinc, caustic potash, and acid nitrate of mercury. I know of no dermatologist—or even "cancer specialist" for that matter—who prefers sulphuric acid.

These are only examples of the conditions for which Thoremedin Paste is recommended. They recommend that this paste, which will produce a slough in the skin that takes two or three weeks to separate and that will be followed by a scar, be applied "lightly" to the indurated lesions of acne, and they minutely describe how it should be applied over the surface exposed after the excision of a cancer.

WHAT DOES IT ALL MEAN?

There would, however, be no reason for criticizing anything more than their judgment if Squibb and Sons offered their paste as a sulphuric acid paste for the treatment of epithe-

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lioma and other things. As a matter of fact, Squibb's acid nitrate of mercury is well known as an agent for the treatment of epitheliomata, which has been long recommended and used with great effectiveness by Dr. Samuel Sherrill in particular. But what shall we think of E. R. Squibb and Sons offering a 35 per cent. sulphuric acid paste as a "new Thorium Remedy" for the treatment of epitheliomas and birthmarks and Heaven knows what ("papules", "molluscum," etc.), and as a substitute for "postoperative radium treatment" and for "x-rays in postoperative treatment for neoplasms." What has come over the house? The firm had a reputation for anybody to cherish with pride. E. R. Squibb is really a great name, and for half a century the firm of Squibb held the unquestioned confidence of the medical and pharmaceutical world. Have all of the traditions of the firm been suddenly thrown to the winds? Have its members determined all at once to embark on a career of exploitation of proprietary remedies under misleading names and of mischievous properties, whose composition it is not for the good of us of the profession to know, instead of zealously pursuing, as of old, the business of manufacturing drugs and chemicals of known composition and of unquestioned "Purity and Reliability"? Has the result of sixty years of experience with the medical profession been so poor as only to lead to the conclusion that the old policy is not profitable or not worth while? As a matter of fact is there a drop of the old Squibb blood in the firm? These are not useless questions and the medical profession has a right to raise them.

ANALYSIS OF THORADIN (THOREMEDIN)

The following is a summary of the report of the Chemical Laboratory of the American Medical Association on the substance discussed by Dr. Pusey in the preceding article. The details of analysis will appear in the Annual Reports of the Chemical Laboratory. It will be noticed that the package analyzed bore the name Thoradin, whereas Dr. Pusey refers to it as Thoremedin. This is explained by the fact that, as announced by E. R. Squibb & Sons, they have recently changed the name of the product.

An original package of Squibb's Thoradin was purchased on the open market and analyzed in the Association's laboratory, with the following results:

Thoradin is a white odorless semiliquid mixture which on standing settles, showing a clear liquid in the upper part of the bottle. On account of the small amount of material and the difficulty of mixing thoroughly, the entire content of the bottle was washed out with water, filtered and the insoluble matter thoroughly washed, dried and weighed, and the filtrate made up to a definite volume. In this way Thoradin was divided into two parts, soluble and insoluble.

The insoluble matter was found to constitute 61.82 per cent. of the whole, and of this 61.09 per cent. was found to be lead sulphate. The difference, or 0.73 per cent., consisted of a substance which responded to tests for thorium or related metals.

The soluble portion responded to tests for sulphuric acid, but only faintly to tests for hydrochloric and nitric acids. By titration and sulphate determinations, the sulphuric acid content of Thoradin was found to be equivalent to 33.06 per cent. absolute, or 35.58 per cent. sulphuric acid, U. S. P. The residue left on evaporating some of the solution of the soluble part, after gentle ignition was found to be about 0.90 per cent. of the whole; of this a small part was lead sulphate. This residue responded also to tests for thorium or related metals.

Assuming that all of that part of the insoluble matter which responded to thorium tests and all the soluble matter not proved to be lead sulphate was entirely sulphates of thorium or related metals, the total content of these constituents could not be more than about 1.63 per cent.

Since the work of Professor Gale, on the radioactivity of Thoradin, indicated less than 2.5 per cent. of thorium salt, and the results of the chemical examination indicated at most 1.63 per cent. thorium salt, it was not considered of sufficient importance to isolate and determine separately thorium, or other related metals.

From the above examination we conclude the composition of Thoradin to be essentially the following:

Sulphuric acid, U. S. P.	35.58 per cent.
Lead sulphate	61.09 per cent.
Sulphate of thorium or related metals not over	1.63 per cent.
Hydrochloric acid	trace
Nitric acid	trace
Water (by difference)	1.70 per cent.
Total	100.00 per cent.

SULPHURRO

Another Liquid Sulphur Humbug on the Market as a Panacea

Sulphurro is the name of a cure-all sold by the C. M. C. Stewart Sulphur Company, Inc., Seattle, Wash. It is a brownish-yellow liquid having the odor of rotten eggs and decayed cabbage. It is to be used, so the manufacturer says, in such conditions as rheumatism, asthma, goiter, eczema, dyspepsia and all diseases of the stomach, bowels, kidneys, skin and blood. It may also be used as a rectal enema, a vaginal douche or as an eye wash. A specimen of this nostrum was sent by Dr. A. E. Hillis, LaMoure, N. D., and a cursory examination of the stuff was made by the Association's chemists. They reported as follows:

"Chemical examination shows that Sulphurro is essentially similar to Sulphume. That is to say, it is a solution of calcium sulphid and responds to tests for calcium, sulphid, polysulphid and hydroxid. Like Sulphume then, it is evidently a solution such as is obtained when lime, sulphur and water are boiled together."

Our readers will remember that Sulphume was dealt with in THE JOURNAL, Dec. 2, 1911. Sulphurro is not worth a more extended notice. Of course, it will not cure rheumatism, asthma, eczema or any of the other hundred-and-one diseases for which it is recommended. There is little doubt, however, that it will find a ready sale among those who believe that the therapeutic value of a remedy is in direct ratio to the vileness of its odor.

THE ELIGIBILITY OF NON-PROPRIETARY MIXTURES

Physicians and publishers of journals who wish to adhere to the recommendations of the Council on Pharmacy and Chemistry are herewith reminded that non-proprietary mixtures are deemed by the Council as eligible for prescribing and advertising, without the necessity of being admitted to New and Nonofficial Remedies.

Strictly non-proprietary mixtures of official substances, etc., (for instance, morphin and atropin tablets) are generally sold without any special claims which would make them subject to investigation by the Council; while the number of these combinations listed by the various manufacturers is so great that even their mere enumeration in New and Nonofficial Remedies would be practically impossible. The intelligent physician is the best judge of the advisability of prescribing ready-made non-proprietary mixtures of this type. The danger is that he may not always be able to discriminate clearly, on the one hand, between these non-proprietary mixtures that are not listed in New and Nonofficial Remedies because their admission would be superfluous, and on the other hand, the proprietary mixtures which do not appear in New and Nonofficial Remedies because they have been refused admission. The appended definition of "proprietary mixtures" shows where the line is drawn by the Council.

PROPRIETARY MIXTURES.—A mixture will be considered as proprietary, and therefore requiring consideration by the Council and admission to the book or appendix, if it contains any proprietary article, if it is marketed under a name which is in any way protected or if its manufacturer claims for it any unusual therapeutic qualities.

All mixtures to which this definition applies are deemed proprietary and will be listed by name in New and Nonofficial Remedies, if they comply with the rules of the Council.

In all doubtful cases, the secretary of the Council will gladly supply specific information.

W. A. PUCKNER,
Secretary of the Council on Pharmacy and Chemistry,
535 Dearborn Avenue, Chicago.

Correspondence

The Management of Normal Labor

To the Editor:—In all the discussion regarding the deplorable status of obstetrics in this country only a few of the factors in the problem have been touched. Specialists, like Dr. Williams (THE JOURNAL, Jan. 6, 1912, p. 1), with hospital facilities, trained assistants, a laboratory and absolute control of patients may make invidious comparisons but that does nothing to elucidate the subject. Obviously only a small percentage of the parturient women of the country can or will avail themselves of the benefits of a hospital or trained accoucheur. The general practitioner has the knowledge his college was capable of imparting, plus what he has added in practice. To his credit be it said, he usually makes the most of it. His equipment is generally greater than his compensation warrants. Moreover, he has his living to make and cannot be too insistent with his patient over whom, usually, he has no control. His case may be miles in the country with bad roads or a blizzard prevailing and he may have no knowledge of the presumptive nature of the case until he sees it. How is he to know what meddlesome woman had made a prior digital examination or what dope had been given? Frequently the patient's bed is "made" with the soiled family laundry or the chronology of births in the family is written in the stains on the mattress. He is always called in a crisis and usually at the last moment.

Manifestly we cannot all have hospitals or if we had we could not induce our patients to enter them. And what are we to do with those who will not employ a doctor except in a critical case? Neither can we take to our cases an operating equipment and trained assistants.

Granting that we were all educated in obstetrics according to Dr. Williams' standard, pray, where is this education to end? A prior contributor to THE JOURNAL takes the profession to task for lack of expert knowledge on sanitation, and so we might have to go all down the line and get specialists' training to be competent country doctors.

J. H. MACKAY, Norfolk, Neb.

To the Editor:—I have been practicing in the country for seven years, and during this time have had enough obstetric experience to enable me to say that I have never found (and I may say that I do not believe there exist) any of the exigencies to which you refer (THE JOURNAL, February 10, p. 428) that cannot be met and handled just as capably by the country physician as by anyone else. Women have babies just the same way in and out of city practice, and apart from the fact that hospital facilities are not so easily had in the country, there is no reason why methods of management should not be quite the same in one locality as in another. It should be remembered, too, that the article in question dealt with normal labor; not with difficult cases. I am a member of the State Board of Medical Examiners for Louisiana, and we refuse to pass applicants in the midwifery examination who deliver the placenta by pulling on the cord.

ESPY M. WILLIAMS, Patterson, La.

To the Editor:—I will admit that some of us who practice in the country do lose ourselves to the outside world to a great extent in following those precepts laid down by the masters of twenty or more years ago, but I will not admit that this is the rule. I have seen more medical men vegetating right in the midst of medical activity, research and achievement, than in the country districts. It is my candid belief that there is a greater percentage of medical men in this part of the country who are capable of doing, and are doing, the most modern analytical work in urinary, blood, stomach and culture diagnoses than can usually be found in the cities, and the reason is exceedingly simple. They have no specialists to do this work for them and are thus pushed into reliance on their own efficiency in interpreting the best works obtainable on the work in hand, or allowing it to go by default, and this, the country physician is usually loth to do. It is my opinion that if that bolt of inefficiency was fired at the country practitioner, it was not only an unjust shot, but a very bad one, for it went wide of the mark.

My own experience has extended over a period of nearly twenty-one years; I have never had septicemia result from my method of handling these cases in well over a thousand deliveries, and never more than a partial rupture of the perineum; I have never lost a parturient woman, and only two babies, both of which died from asphyxiation *in utero*, and I have yet to shave the pubes. Rubber gloves, a Kelly pad, surgical gowns and cap, antiseptics and good soap, are always to be found in my obstetric bag. I always give a hypodermatic of an ergot preparation following the birth, see that the babe is properly dressed, and then express the placenta if it has not already been delivered, order a 1-to-2,000 bichlorid douche to be used twice daily after the first day, for three days, and then, once a day for four or five days. I have never encountered a serious post-partum hemorrhage or even a flow approaching the dignity of a hemorrhage, following this practice, and I nearly always make slight traction on the cord.

The results enumerated above have been obtained among patients ranging from the high-class, really intelligent ranchwomen, with every necessity at hand or means to obtain them, down to the squalid full-blooded Sioux who never have any of the necessaries, but an overabundance of the undesirable. Sometimes, it has been a pleasure to attend such cases, but usually, the careful physician is obliged to stand guard over his patient with a club to prevent the interference of some old "Granny Quack" or "prairie midwife" ("trained nurse," she calls herself), who is usually so grossly ignorant that asepsis has no meaning for her and ordinary cleanliness is a waste of time—a neighborhood dopester, whose clothing is so saturated with desiccated perspiration that the odor is positively sickening. She is a teratologist of no mean ability, and an impressionist, with an array of statistics at her tongue's end that would convince the most skeptical.

Is the country practitioner so far behind the times when he can successfully combat these obstacles? We admit that the world rarely hears of our victories, but the reason is obvious: we have no daily press to subsidize and could not ethically make use of it if we had; the blare of a trumpet would be answered by the howl of a coyote, and our bulletin boards would seldom be scanned by human eyes. As to the advice offered, we are very like the tenant whom the landlady pressed to eat some rhubarb tart. "Mony thanks, mem, but I dinna need it."

F. W. MACMANUS, M.D., Buford, N. D.

The Army Canteen

To the Editor:—The canteen seems to be a live topic. It is well that it should be, for the discipline of the army depends in time of peace on the post canteen and its accessories, and discipline in times of peace predetermines effectiveness in actual service, and these, in the last analysis, determine the weal or woe, the eventual perpetuity of the government.

Several times have I been tempted to join in the discussion but as often have deferred because public opinion, I believe, however created, has little influence with Congress in general legislation. The party or individuals with the "pull" in the congressman's district just prior to election determines the member's vote when safe in his seat; the same is true of the senator.

Actual experience gained by observation is far superior to the wisest theory. During the war with Spain and subsequently I was detailed at a Southern frontier post and during nearly two years had ample opportunity to witness operations of the army canteen. About midway of my service the canteen was abolished at my post as it was concurrently at all the others.

By the law that created it the surgeon of the post is manager of the canteen, with two other commissioned officers as an advisory board, and therefore my opportunity for observation was ample. During the first half of my service, when the canteen plan was in operation, I do not now remember that any soldier was ever committed to the guard house, nor do I remember seeing one intoxicated on the reservation

or elsewhere. The post at different times was occupied by both white and colored troops, for during two years, more or less, there was much movement of troops till matters settled down to a normal military condition. During the time the canteen was in order discipline was easily maintained and an earnest, contented military atmosphere pervaded the routine duties of the day. The tidy appearance of everything connected with the post, the neat and soldierly demeanor of the men would attract attention of all visitors. On pay-day the members of the hospital corps seldom drew 50 per cent. of what was due, the balance remaining in the hands of the pay master, to be refunded to the soldier when he should be discharged from the army. The amount retained was entered to the soldier's credit in a pass-book similar to the deposit book commonly used by banks over the country.

I believe that the government paid 4 per cent. on the soldier's deposit, which, on his final discharge, often amounted to a snug sum. I remember several who were able to buy one or more of the government's bonds that were offered at that time for the prosecution of the war. The profits derived from the canteen enabled the soldier in his barracks to live like a gentleman, for that was the purpose, and to maintain a library, gymnasium and billiard-room; in fact the canteen was the soldier's club where beer and light wines were dispensed under the watchful care of a non-commissioned officer. The soldier was always respectful to his superior and on his good behavior, and seldom needed a reprimand. I always enjoyed a visit to the canteen to watch the boys quietly when they were engaged at cards, or playing billiards, or taking a turn at the gymnasium, writing home to wife, or mother, or maybe to sweetheart, reading a book or magazine or newspaper (all paid for by profits of the canteen), and everyone speaking in a low tone of voice. I never heard of a case of gambling. When there chanced to be no soldiers in the bowling alley or gymnasium the officers off duty would warm up for an hour there themselves. There always seemed to be a pleasant understanding between men and officers, and a spirit of contentment and refinement was the order of the day. This picture is not overdrawn; every word is true.

One day an order came from Washington to suspend the canteen, to store the billiard-tables and other impedimenta away, and to vacate the rooms. The soldier's club-house was vacated and he was to all intents and purposes turned out of doors. A great change seemed suddenly to come over the scene. Old rookeries outside the reservation long abandoned were rehabilitated with low humanity and the vilest rot-gut whisky, and the government had no power to restrain them. Two days after the canteen had been vacated I had to send the hospital ambulance out to the degenerate settlement to bring in a soldier who had been fatally hurt in a drunken brawl. And this often occurred thereafter. Then the wards were soon filled with the cases of syphilis and gonorrhea and other avoidable diseases. A feeling of unrest among the soldiers and of apprehension among the officers had taken the place of contentment and peace. The paymaster's pass-book was no longer required and the old mother back in the distant home and the sweetheart were forgotten. And this picture is not overdrawn, either, or half told.

I myself believe in absolute prohibition if it were practicable, but I have told truthfully how abolition of the canteen worked under my observation where I was stationed.

A. S. CONDON, M.D., Ogden, Utah,
Late A. A. Surgeon, U. S. A.

The Amendment to the Owen Bill

To the Editor:—In THE JOURNAL, Dec. 23, 1911, you published, under the caption "Senator Owen Amends His Bill," what purported to be a copy of the amendment as offered by its author, along with what appear as editorial comments on both the bill and your statement of its amendment by its author. You have omitted from the amendment in question the following words: "including the head of the department." They should appear as a clause, set off by commas, between the words "department" and "shall," near the close of your rendition of this document. I respectfully request that I be informed at your earliest convenience about this grave omission, whose importance to the medical profession of the whole country I forbear to descant on now.

W. F. ARNOLD, M.D., Bowling Green, Ky.

[COMMENT: Comparison of the amendment as sent us with the amendment as printed in THE JOURNAL shows that the words referred to were omitted. The error occurred in making a copy of the amendment for the printer. A later amendment eliminates the word "department" and substitutes the word "bureau"; so that the omitted portion would read "including the head of the bureau." The latest revision of the bill appears correctly in the *Bulletin of the American Medical Association*. These amendments are not as yet actual amendments, the bill now pending before the Senate being technically as originally introduced. They are, rather, proposed amendments which the committee has agreed to make or which it has under consideration.—EDITOR.]

Cocain not Decomposed by Heat

To the Editor:—The statement is frequently made that cocain in solution is decomposed by heat, and therefore it is not feasible to sterilize such solutions by boiling.

This is one of the errors that mysteriously creep into literature and are perpetuated by succeeding compilers, and in the comprehensive article on therapeutics of coca in THE JOURNAL, February 17, page 481, the error is given further sanction.

It is well known to chemists that neutral solutions of cocain hydrochlorid are quite stable; cocain certainly cannot be decomposed to an appreciable extent during a brief exposure to 100 C. I have demonstrated this by boiling a 2 per cent. solution for five minutes and then extracting the cocain as alkaloid. This is probably about five times as long as solutions are usually boiled. Different experiments showed a loss ranging from 1 to 1.7 per cent. of the cocain employed, and this loss is within the limit of experimental error. It would certainly be negligible from a medical standpoint.

By long-continued boiling, part of the cocain might be saponified to benzoyl-ecgonin. Stockman finds that benzoyl-ecgonin acts like caffein, but less powerfully, and does not paralyze the sensory nerves. (U. S. Dispensatory, Ed. 19.)

If a trace of cocain were decomposed by boiling, it would be replaced by a trace of benzoyl-ecgonin, therefore the utmost harm that could follow would be an inappreciable reduction of the dose.

D. M. HOLBROOK, Suffern, N. Y.

[COMMENT: Mr. Holbrook, who is the consulting chemist of Schieffelin & Company, has for many years been in charge of the manufacture of cocain for that firm and hence may be regarded as an authority on the subject.—ED.]

Public School Children and Optometrists

To the Editor:—In the *Optical Journal and Review of Optometry*, Feb. 15, 1912, the following appeared:

"Dr. William Ravine, chief medical inspector in the public schools, has great faith in optometrists. He sends many of the children suffering from defective eyesight to the various optometrists."

Permit me through the columns of THE JOURNAL to deny the above statement as absolutely false and without foundation. I have never expressed any faith in optometrists, nor have I ever sent any child suffering from defective eyesight to any oculist. Children in the public schools suffering from defective eyesight are referred to their family physicians. If careful investigation reveals the fact that they are unable to employ a physician, they are referred to the various clinics, which in turn give them prescriptions for glasses, which are filled by the various oculists in our city.

Investigation disclosed the fact that the article was written by a Mr. Benson, a *Times-Star* reporter, who retracted the statements in the article to Dr. John Landis, health officer.

WILLIAM RAVINE, M.D., Cincinnati,
Chief Medical Inspector of Schools.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE TRUSS IN INGUINAL HERNIA

To the Editor:—I am looking for literature which will give me statistics as to the relative merits and demerits of the use of the truss for inguinal hernia as against the operative treatment. Of course, I realize that operation is the best treatment, but I want some figures to show the morbidity and the mortality rates of the truss.

CLYDE F. ROSS, Anderson, S. C.

ANSWER.—It is impossible to give absolute figures concerning the morbidity and mortality rate of inguinal hernia treated with trusses. Hernia is a common affliction; carefully made estimates indicate that about one individual in twenty-five has a hernia, 75 per cent. being males, and that inguinal hernia forms about 80 per cent. of the total number. What percentage of these patients wear trusses it is impossible to say, but judging from the enormous number of trusses sold, it must be very large.

Men will be found who have inguinal hernias and who are doing all kinds of hard work, which shows that the average inguinal hernia does not interfere materially with a man's working capacity, but men with large irreducible or uncontrollable herniae are certainly very much incapacitated. The great danger to which an individual with a hernia is subject is, of course, strangulation, and while the hernia itself, if properly cared for, may not interfere with the person's ability to work, the particular work which he may be doing may greatly increase the chances of strangulation.

It is difficult to estimate the frequency with which strangulation takes place, but some general idea may be gained from the number of strangulated herniaa operated on in the large hospitals. Sultan was able to collect from seven German clinics reports of 1,420 strangulated hernias operated on with 296 deaths, or a mortality of 20.7 per cent. The mortality following the radical operation for hernia is practically *nil*—less than 0.5 per cent. Taking into consideration the great frequency of hernia, the number of operations for strangulation, the high mortality of operations under these conditions and the very low, or practically no, mortality of operations for the radical cure, it has been estimated that the average person with a hernia runs about three times the risk of dying from his hernia by not having it operated on that he does by having it operated on and cured, to say nothing of the annoyance of constantly wearing a truss.

HYPODERMIC INJECTIONS OF IRON IN ANEMIA

To the Editor:—Some time ago I received from a physician in New Jersey a reprint of a paper on persistent anemia in which the hypodermatic use of a form of iron was recommended. I have lost that paper and forgotten the name of the author. Possibly he is known at your office. Also, please refer me to articles on this subknown at your office.

JOHN M. WAMPLER, Richmond, Ind.

ANSWER.—Perhaps the article you wish is one by Dr. G. K. Dickinson, Jersey City, on "Anemia: Its Pathogeny and Hypodermic Treatment," in the *Medical Record*, New York, Sept. 3, 1910. The following are some other articles on the subject:

Bullock, E. S., and Peters, L. S.: The Use of Hypodermics of Citrate of Iron in the Secondary Anemia of Tuberculosis, THE JOURNAL, Oct. 28, 1911, p. 1428.

Morse, J. L.: Treatment of Anemia in Infancy with Citrate of Iron Administered Subcutaneously, THE JOURNAL, July 10, 1909, p. 107.

Peters, L. S.: Treatment of Secondary Anemia of Tuberculosis with Hypodermics of Iron, *Med. Rec.*, New York, Oct. 10, 1908.

PICRIC ACID AS AN ANTISEPTIC

To the Editor:—The statement is made (THE JOURNAL, Dec. 16, 1911, p. 2028, abstract 5) that "picric acid is about four times as efficient as phenol as a local antiseptic," and the use of a 4 per cent. alcoholic solution of picric acid as a disinfectant of skin, forty-eight hours after vaccination, is advocated. How was this efficiency of picric acid demonstrated? Also refer me to a description of Gräupner's test for early cardiac fatigue.

CHARLES HOWARD MILLER, San Leandro, Cal.

ANSWER.—In the original article by Schamberg and Kolmer (*Lancet*, Nov. 18, 1911), the method of determining the bactericidal power is described. The test organisms employed were the *Bacillus typhosus* and the *Staphylococcus albus*. These were subcultured in bouillon at least three times before being used. Twenty-four-hour old cultures were well shaken and filtered through sterile filter paper and 0.1 cm. of each was used as a dose. The standard of germicidal power was that employed by Anderson and McClintic, which is known as the Hygienic Laboratory phenol coefficient. The experiments were carefully performed, so that the results are presumably reliable.

A description of Gräupner's method, with probably a reference to the original, is given in an article by Cabot and Bruce in the *Am. Jour. Med. Sc.*, October, 1907.

OXIEN TABLETS

To the Editor:—Please give the composition of Oxien Tablets.

JOHN ESSER, M.D., Perham, Minn.

ANSWER.—The composition of Oxien Tablets is given in "Nostrums and Quackery," page 450. It is there stated that one analysis of this nostrum showed that the tablets were "a mixture of milk-sugar, cane-sugar, corn-starch, oil of sassafras, oil of wintergreen and a bitter principle. The tablets were colored red with eosin."

ALCOHOLISM AND SURGERY

To the Editor:—A man who had been a hard drinker since he was 12 years old, and who is now 36, says that he has been cured of alcoholism by a surgical operation performed on his appendix and gall-bladder in the summer of 1911. He says that he now has no desire for alcohol. I have never observed a similar case and I am desirous to know if such cases have been observed by any readers of THE JOURNAL.

J. H. BUSH, Sterling, Colo.

The Public Service

Medical Department, U. S. Army

Changes for the week ended March 2, 1912.

Beeuwkes, Henry, lieut., February 23, ordered to the Army Medical School, Washington, D. C.; March 10, 1912, to act as instructor in the course of radiography; on completion of this duty to return to his station.

Wells, Francis M., first lieut., M.R.C., February 24, resignation accepted, to take effect April 10, 1912.

Grubbs, Robert B., major, February 24, granted thirty days' leave of absence on surgeon's certificate of disability.

Stayer, Morrison C., lieut., February 26, ordered to report at San Francisco for examination for promotion.

Millikin, John D., C.D.S., February 26, ordered to proceed to his home for annulment of contract.

Chamberlain, W. P., major, February 26, granted leave of absence for one month and fifteen days, to take effect on completion of his duty in London, England.

By special orders No. 47, War Department, Feb. 26, 1912, each of the following named officers of the medical department, on his arrival at San Francisco, will proceed to the post specified after his name and report in person to the commanding officer thereof for duty and by letter to the commanding general of the division indicated:

First Lieut. William R. Dear, Medical Corps, Fort Robinson, Neb., central division.

First Lieut. Clarence A. Treuholtz, Medical Corps, the presidio of Monterey, Cal., western division.

First Lieut. Frederick S. Wright, Medical Corps, Fort Adams, R. I., eastern division.

First Lieut. Lee R. Dunbar, Medical Corps, Fort Douglas, Utah., western division.

First Lieut. Addison D. Davis, Medical Corps, Fort Riley, Kan., central division.

First Lieut. Elsworth Wilson, Medical Reserve Corps, Fort Huachuca, Ariz., western division.

First Lieut. Henry F Philips, Medical Reserve Corps, Fort Bliss, Tex., central division.

First Lieut. Robert Lemmon, Medical Reserve Corps, Fort Hancock, N. J., eastern division.

First Lieut. Oswald F. Henning, Medical Reserve Corps, Fort Stevens, Ore., western division.

First Lieut. William M. Archer, Jr., Medical Reserve Corps, Fort Riley, Kan., central division.

Crampton, Louis W., colonel, February 27, ordered to proceed to his home to await retirement.

Treibly, Charles E., M.R.C., resignation accepted Feb. 27, 1912.

Feely, James F., A.D.S., February 29, reported for temporary duty at Fort Wood, N. Y.

Fisk, Owen C., lieut., February 29, left Walter Reed General Hospital, Takoma Park, D. C., on six months' sick leave.

Medical Corps, U. S. Navy

Changes during the week ended March 2, 1912.

Payne, J. H., A. A. surgeon, detached from the marine recruiting station, Norfolk, Va., and ordered to the marine recruiting station, Baltimore.

Wilson, G. B., medical inspector, detached from duty as fleet surgeon of the Asiatic fleet and ordered home to await orders.

Taylor, J. L., P. A. surgeon, transferred to the retired list from Feb. 19, 1912.

Duhigg, J. T., asst. surgeon, ordered to treatment at the naval hospital, Washington, D. C.

Treibly, C. E., A. A. surgeon, appointed an acting assistant surgeon from Feb. 24, 1912.

Miscellany

Epidemic Cerebrospinal Meningitis in Texas

The history of the epidemic of cerebrospinal meningitis in Texas for 1911-12 begins with the cases reported in Dallas, one case in October and nine cases in November, increasing in December and January, and averaging in January about seven new cases a day. In Waco the first nine cases were reported on December 20, after which cases were reported for the remainder of the month, on the average, about five new cases a day; for January the report of new cases averaged three each day. In Fort Worth the four cases reported for December occurred between Dec. 20 and 31, 1911, and the average report of new cases in January, 1912, was about three a day. In Houston the first case was reported January 1, and the average number of new cases was about one a day. A few cases were reported during the latter part of January in Galveston. At other points in Texas cases of the disease were reported in January, San Antonio being the only large city apparently free from the disease.

It was reported that the weather conditions for the northern part of the state had been unusual. During the past three years a drought had occurred so that drinking-water had to be shipped into Dallas. The present winter season was unusual, in that for six weeks, between December and January, continuous rains had occurred, and severe cold weather also prevailed. It was also reported that an epizootic of "blind staggers" had prevailed among horses about the time this epidemic started.

The occurrence of more than one case in a family has been comparatively rare. The disease prevailed chiefly among the poorer classes living under insanitary conditions, but others were also affected. The disease affected males more than females, and the mortality was slightly less among the females.

The extremes in ages were 8 weeks and 80 years. From the statistics of 302 cases in which the ages were given, fifty-five occurred in children less than 5 years; fifty-four between 5 and 10 years; twenty-four between 10 and 15 years; forty-four between 15 and 20 years; fifty-four between 20 and 30 years; twenty-five between 30 and 40 years; twenty-seven between 40 and 50 years; and nineteen for persons over 50 years of age. This gives a total of 177 cases, or 58.6 per cent., occurring in persons less than 20 years of age; and 125, or 41.4 per cent., of the cases in those over 20 years of age.

The people in the infected cities seemed to be in perfect accord with the city health authorities in their endeavors to control the spread of infection. The following measures were found practical of enforcement:

1. Placarding and quarantining of a house.
2. Establishment of an isolation hospital for the care, and treatment with specific serum, of cerebrospinal meningitis cases only.
3. For detecting carriers: Bacteriologic examinations of nose and throat secretions of all persons quarantined in houses where cases occurred.
4. Medical inspection service and board of diagnosis.
5. Distribution of circulars advising (*a*) use of an antiseptic spray for nose and throat; (*b*) careful attention to personal hygiene—mainly cleanliness—avoid chilling of body and maintain good health; (*c*) avoidance of public gatherings and close contact with persons; (*d*) cleaning of premises and free ventilation of houses; (*e*) that the disease is infectious and that healthy persons may innocently transmit it to others by disseminating germs, which may be in their nose and throat, by coughing, sneezing, kissing, etc.; (*f*) that the disease is not carried by clothing, merchandise, food, etc.

It was impossible to trace the source of infection from one case to another, nor was it practicable to determine what factor was necessary in causing the development of the disease in one person and not in another known to be intimately in contact with the disease.

There were a number of towns throughout Texas which quarantined places where the disease had made its appearance. As this was impracticable and gave a false sense of security, owing to the widespread infection and large number of healthy carriers, it was advised that quarantine was ineffective and simply interfered with commerce.—Report of Passed Asst. Surg. R. H. von Ezdorf, *Pub. Health Rep.*, Feb. 23, 1912.

Operability of Uterine Cancer.—Of the eighteen cancer of the uterus patients subjected to a radical abdominal operation by F. J. Taussig (*Journal Missouri State Med. Assn.*), seven died as a result of the operation. Five succumbed within the first four days after operation; one died two weeks afterward; and in one patient death resulted from extensive suppuration of the pelvic connective tissue four weeks after the laparotomy. This operative mortality of over 38 per cent. Taussig says would, under ordinary circumstances, be most appalling. If it is remembered, however, that Wertheim's primary mortality was 48 per cent. in his first fourteen cases, these figures are correspondingly not so bad. Dividing these eighteen cases into three groups, the early ones, the advanced ones and the far advanced ones, further light is thrown on this operative mortality. Group 1. Three early cases in which the disease did not extend beyond the uterus. All the patients recovered from the operation and are at present free of recurrence. Group 2. The advanced cases in which the disease had extended to the parametrium and vagina but did not yet occlude the ureters or deeply invade the bladder wall numbered seven. Five patients recovered and two died. Group 3. The far advanced cases showed deeper involvement of the bladder wall or occlusion of one ureter, or extensive infiltration of the vagina and paravaginal tissues. They numbered eight, and five of these patients died. Of the three who recovered from the operation, two died of a recurrence within one year and Taussig will be much surprised if the third case does not likewise terminate fatally. In view of this experience Taussig feels that the cases of Group 3 should really have been considered inoperable. Figuring only the certainly operable cases of Groups 1 and 2, numbering ten cases in all, the operative mortality is 20 per cent. That, with increased experience, the operator will reduce his primary mortality considerably is generally conceded by all who have done this operation.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Mississippi State Medical Association, Jackson, April 9-11.
Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH*

Held in Chicago, Feb. 26-27, 1912

(*Continued from page 658*)

The Conjoint Board of England

Mr. Frederic G. Hallett, London, England, described the organization and the system of examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England. This address and the discussion thereon will be published in THE JOURNAL next week.

The Relation of the Medical School to the Intern or Hospital Year

REUBEN PETERSON, M.D., professor of obstetrics and gynecology, University of Michigan, Ann Arbor: As a matter of fact, the fifth clinical year in medical education is already in existence. Already a certain number of each graduating class take a year or more of hospital training and this tendency is increasing rather than diminishing. In other words a major-

* The full reports of the conference will appear in the *Bulletin* of the American Medical Association in two or three weeks. A copy will be sent to any one interested on receipt of a 2-cent stamp.

ity of students are insisting on more than the medical school requires. This hospital training has never been systematically considered by the medical school since many more fundamental problems needing immediate solution have confronted medical educators during the last two decades. Now that this pioneer work has been done, however, it is time for the medical school to take hold seriously of the hospital year and make it an integral part of the medical course. Those who have guided the student for four years will not be content to turn him over to others during this most valuable and important part of his preparatory work.

Every medical school worthy of the name should add the hospital year to its curriculum, if it can do so, and it should be to the advantage of the student, the hospital and the medical school. One school is making an attempt to solve the problem and no doubt other schools are busy with the same task. Plans may differ but this will result in a free discussion of the project and will show the best mode of procedure.

Last May the whole subject of hospital internships and appointments by faculty of the University of Michigan medical school was placed in the hands of a committee of three. Dissatisfaction had been expressed with the lack of system in vogue and the confusion arising from lack of cooperation on the part of various members of the faculty. Hospitals wanting to secure students about to graduate wrote to individual members of the faculty who secured the best men they knew for the positions, to find out later that the students had failed to keep their agreements with other members of the faculty who had assigned them to other positions. Again, students asked for recommendations for positions not particularly approved of by the faculty. In short, the entire intern problem was in such a state of confusion that something had to be done.

The committee, consisting of Dean Vaughan, Dr. A. Walter Hewlett and myself, has worked on the plan that a compulsory fifth clinical year eventually be added to the medical curriculum, but not till after the medical school had obtained first hand knowledge of the best hospitals throughout the country to which its students were eligible. To eliminate confusion it was planned that all appointments to hospital positions or for particular positions be made by this committee. The mutual obligations of student and hospital were to be set forth so that each might be benefited by active cooperation. A circular letter together with a questionnaire was sent to all general hospitals having a hundred beds or over setting forth the avowed policy of the University of Michigan medical school to add eventually a fifth hospital year to its present four-year course, and stating that the faculty wanted cooperation with the very best hospitals since it was willing to stand sponsor for the students it recommended. All hospitals willing to cooperate in systematizing the intern question were requested to fill out and return the questionnaire which called for information regarding the number of beds; the number of interns; their manner of appointment; the nature of examinations; length and nature of service of the intern and his relation to clinical laboratories. Inquiry was also made regarding the pathologic department, the out-patient service, library facilities and the accommodations for and authority over interns.

These letters and questionnaires were sent to 155 hospitals and responses were received from ninety-two. Ten were parts of certain medical schools and their internships were reserved for their own graduates. Eighty-two hospitals, and as was to be expected the very best hospitals, took pains to answer the questions fully. Some questionnaires were so carelessly attended to as at once to determine the standard of the hospital. Sixty-three hospitals were placed on an approved list, although undoubtedly mistakes were made both in approving and in rejecting hospitals. The method of avoiding such mistakes will be referred to later.

A short résumé of the salient facts relating to the hospitals on the approved list was arranged alphabetically according to states, in a small, twenty-four page, vest-pocket booklet and given to members of the junior and senior classes. For more detailed information the students were referred to the chairman of the committee who personally interviewed each member of the class regarding the relative merits of the hospitals on the approved list and recorded the choice of hospitals on blanks provided for that purpose. This was done as early as possible so that those not securing hospital appointments would be at liberty to take competitive examinations if such were necessary.

The eagerness with which the students sought this information showed how handicapped they had been in judging of the value of a hospital as regards its internships and how negligent the faculty had been in not considering this question systematically before.

The committee will secure frequent reports from the student in regard to his service, whether he is being given opportunities for learning, in what the service is lacking, etc. The hospital, in turn, will be asked to report on the conduct of the intern, whether he is faithful to his duty or lazy and careless, etc. In this way the committee will endeavor to stand behind both intern and hospital and see that each fulfils his contract, that any differences may be amicably adjusted and that both hospital and intern may be benefited.

The work has progressed far enough to show the difficulties underlying any plan carried out by a single school working by itself; therefore we ask your full discussion of a proposal to make this movement of a fifth hospital year national in scope.

It is high time that an extensive report be made of the hospitals in the country which make use of interns. This report on hospitals would doubtless show many institutions consuming the intern's time without adequate return. For the young graduate gives during his intern service a year or more of the most receptive period in his life. Not that hospitals deliberately cheat the student, but their conception of what is best for him may do him more harm than good. Eager to put his theoretic knowledge into practice, the young intern willingly accepts at first all the routine practical work which can be loaded on him. Later he may realize that his golden opportunities for studying disease in a broad way, in all its aspects, have been wasted. This is all wrong and the hospital allowing such a system is to be criticized.

The development of the highest types of hospital internist, surgeon and specialist requires the employment of many paid assistants whom the hospital chief brings into the hospital with him. They are paid to take accurate histories, make minute examinations, assist at operations and do careful pathologic work. It pays the hospital chief to keep one or more assistants a number of years and they in turn are only too willing to serve their apprenticeships not only for the salaries obtained but also for the experience which they consider of more value. Although this system makes for high, first-class scientific medicine and surgery, the fact remains that the intern, even in the highest type hospital, is crowded out and in some hospitals acts merely as an orderly except that occasionally in an emergency he may be allowed to prescribe for a patient. This picture may be overdrawn but that it is true in some hospitals is undeniable. Another movement militating against the proper education of the intern is the doing away with the mixed service. The chief and his assistants object to breaking in a new man every six months since just as he becomes valuable he leaves for another service. But most interns are unable to determine when they enter the hospital just what branch of medicine or surgery they will be most interested in and this intern year should not be confined to studying one phase of medicine or surgery but should embrace a number of subjects. In the interests of the intern, therefore, a hospital should either continue or restore the mixed service.

On the other hand, the intern is apt to break his contract, leaving the hospital in the lurch if his interests can be improved or in other ways his conduct may be a disappointment.

Much could be gained, therefore, by a thorough inspection of our hospitals under the auspices of the Council on Medical Education of the American Medical Association. Hospitals of certain standards could be placed in Class A, those of a lower grade in Class B, and so on. It would not be difficult to

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classify the hospitals thus, through a personal visit and inspection of each institution. This inspection and report would be preliminary to a general agreement among schools and hospitals, or perhaps between the Class A hospitals and the Class A medical schools. A medical school of the first class would be entitled to have its students in a Class A hospital. The hospital certainly would agree to this, for it is to its advantage to obtain the best educated and best equipped students for interns. The Class B or C medical schools, on the other hand, would have to be content to see its students enter Class B or C hospitals. This certainly is just and right. Whenever a Class B school is dissatisfied it has the privilege of so improving its conditions as to place it in Class A. If a student rebels at the thought that being in a Class B medical school shuts him out from a Class A hospital, it is his privilege at any time to change to a Class A medical school.

The same reasoning will apply to a Class B hospital. The way is open to it at any time to change its status and secure better educated and, therefore as a rule, more desirable interns.

The carrying out of such a plan, no doubt, would call forth many protests from certain hospitals to learn that as far as medical education is concerned they are not entitled to be in Class A. Such an institution might say that it cared nothing for such a report or classification. But if the report was made with the single object of improving medical education, a hospital entitled as far as its beds and equipment go to be in Class A would be chagrined to find itself in a lower class. If the medical staff were indifferent the managers of the hospital, ever sensitive to criticism, would be sure to take the initiative. Hospitals may assume an independent attitude, but, after all, they are quite dependent on the eager, enthusiastic and hard-working intern, and even the most arrogant members of a hospital staff would not long stand against a systematized and fair demand for improvement of existing conditions. Very little thought has been given to the intern question. Volumes have been written about the four medical college years, but after the student receives his diploma he is left to shift for himself. And he cannot do much to better his condition. If he rebels it is necessary for the maintenance of hospital discipline that he be suppressed. Far different would it be if the proper education of the intern be adjudicated between the hospital on the one hand and a national organization on the other hand.

The fifth or intern year as a part of the medical school curriculum must come sooner or later. It is a part of the ideal plan just outlined. The withholding of a diploma until the fifth or clinical year is satisfactorily completed is essential to good discipline and efficient work, and until it is a part of the curriculum medical educators will not take as vital an interest in it as in the first four years of the course. Let it be an integral part of the course, and then it will be developed and its greatest efficiency secured.

The fifth year cannot with any fairness be made compulsory, however, until the medical schools are better informed regarding existing hospital intern conditions. As soon as the hospital end of the problem has been systematized, then it will be just and advisable to compel students to take the additional hospital year.

Substitutions should be allowed for the clinical year. Some men unfitted for clinical work may prefer laboratory work and should have opportunity for perfecting themselves along that line. Again, there will be students who, although entitled to diplomas, are not fitted to care for the sick. But even for these a way should be provided.

Whether students should obtain their hospital positions by faculty appointment or by competitive examinations is a mere matter of detail. Some hospitals believe they secure better interns by leaving the selection to the faculty who have known the students for four years. But competitive examination may be a better system. Through organization written examinations for different hospitals could be held at the different colleges, and only the successful be obliged to go to the expense of traveling long distances for the oral examinations.

These, again, are mere details which can be worked out as the plan is developed and perfected.

An interesting feature worthy of discussion will be the desirability of urging the student to take his clinical year in some distant hospital where he could absorb new ideas and see what others are doing. This would mean a broader education without impairing his loyalty to his own institution. Thus it would be possible to adopt one of the good features of German medical education, in the place where in America it rightly belongs, in the fifth or clinical year. Efforts to adopt this system during the first four years of the medical course have not up to the present time proved very satisfactory.

In conclusion, allow me to say that of one thing I am certain: if the hospitals be shown the way they will be glad to follow, for above everything else they desire good interns. On the other hand, the latter desire good hospitals and the medical school is vitally interested in both.

DISCUSSION ON THE PAPER OF DR. PETERSON

DR. JOHN B. MURPHY, Chicago: It should be written in every medical school of the present day in our zeal for science, *Do not forget the patient.* Medicine is not an art and it is not a science, but it is an art to which science is applied. The purpose of medical education is to prepare men to treat patients. The patient is the unit around which the medical universe revolves. These are basic principles that have been lost sight of in our modern trend of education. Why? Just look over the division of the student's time. As a student he devotes a certain number of hours to laboratory work, to experimental work, to dissections and clinical work, then ask yourselves: How are the best practical men produced? "By their fruits ye shall know them." The medical school has been put first. The medical school has asked for endowment, the medical school has been the pinnacle of aim of the medical profession more in this country than in Europe. The center around which every item of medical education should revolve is the hospital, and the first thing to ask for in medical education is the hospital. What produced the great men of England in the last two centuries? *The hospital.* And the science which we all admire and love and which is essential must be taught as an applied science, turned to a good purpose in the hospital. The practical in medical education receives too little attention. Why will men be untrained in such a vast science as medicine? Because too little time must of necessity be devoted to the preparatory work for the practice of medicine, but we must send out men to meet the requirements of practice. Every member of this body should be imbued with enthusiasm in order that we can give better medical men to a most deserving and confiding public.

DR. VICTOR C. VAUGHAN, Ann Arbor, Mich.: Medicine consists of facts gathered from the various sciences which can be utilized in the prevention or cure of disease. First of all, a man who is going to study medicine must show that he has some foundation in general education which will enable him to master those facts. Second, he must have special instruction in those branches of the science, the facts of which are utilized in the prevention and cure of disease. In this country our best medical schools have done very well with the first and second parts of medical education. We require as much as we should require for admission to medical schools; we are giving two years of as thorough scientific work as is given in any of the medical schools in the world. The medical student to-day in the best medical schools in this country gets just as good instruction in physiologic chemistry, in bacteriology, in pathology and in the fundamental branches as the German or French student does, or any student in the world. But we are somewhat behind in the study of the application of these facts, and the next thing for us to do is to develop hospital training, and we should strive to make of all of our best hospitals educational institutions.

DR. WILLIAM J. MEANS, Columbus, Ohio: We should now do something practical in the way of establishing a fifth year and do less in the way of advancing the entrance requirements. In other words, what we need to-day is an additional year of medical education. If we are going to give this additional year which is so much needed, we must add it to the

medical course and not as a part of the entrance requirements. There can be no question as to the necessity of a clinical year, and I want to commend the University of Michigan for the initiative step it has taken in the practical solution of this question. To carry out this matter properly it will be necessary for the medical college, in my judgment, to withhold the degree of M.D. until after the hospital year has been completed; in other words, to require a five-year course. In order to do this we will have to standardize hospitals.

DR. SAMUEL W. LAMBERT, New York City: In the Columbia University College of Physicians and Surgeons we have already devoted a certain amount of time to intern work prior to graduation. It is a part of the four-year course. During five months of the last year in the school each student spends his whole time in one of the New York City hospitals as an intern. We call him a clinical clerk. He devotes his time between clinical medicine, surgery, obstetrics, etc. I would welcome a fifth year which will allow of a spreading out of the present curriculum more thinly and will allow of subsequent training as an intern, whereas now students only get a short training as interns in the four-year course. The training, however, should be under supervision. That is absolutely essential. It is not right to increase the amount of intern work that is being done without training and without supervision. The student must be required in this year not only to look into the literature, but to use the laboratory and to be hauled up and make reports to some junior officer of the attending staff.

Before an intern year can be brought about the hospital should be approved by some central body, such as this council, if these students are really to be interns and not slaves of the institution. This means that the hospital trustees have got to undergo a severe and a very exacting course of education themselves.

DR. EDWARD JACKSON, Denver: We must consider the question of specialization in medical practice from all points of view before we can lay down a general curriculum for the fifth year. In this country more than anywhere else in the world we have been influenced by a sort of fetich worship of the idea that a man must have had five or six years in general practice before he finds out the special line of work he wants to do. There was reason for that when the idea was promulgated a generation ago. The reason does not exist to-day, and in the consideration of the fifth year for the practical training of medical men I plead for a careful consideration of specialization in that year.

DR. EGBERT LEFEVRE, New York City: We have been looking too much toward the purely laboratory side of medicine. I agree with Dr. Vaughan that the subjects taught in the laboratory are basic in every sense, but it is unnecessary for the medical school to turn out a finished physiologic chemist or bacteriologist. We must teach men the essentials of these branches so that they are able to read literature intelligently and apply to the practical branches that knowledge which they have gained in the laboratory. The laboratory man is too apt to look on his work purely from the scientific standpoint and not appreciate the part that it bears to the other courses of the medical curriculum. I think it would be well for the state to demand for license that there shall be one year of hospital training, but it must not be thrown on the college. The college cannot demand it any more definitely than it can evaluate the preliminary entrance requirements; it must be done by some central body. Colleges have not at the present time control over hospitals.

DR. ISADORE DYER, New Orleans: For quite a few years fully 25 per cent. of the graduating classes at Tulane have served one or two years in a hospital as interns, having earned such positions by competitive examination. New Orleans is not unlike other large cities in the limitation of intern positions available. There are probably no cities and no medical colleges with any number of students where all of the senior classes can be housed as interns. It is a serious question, then, how a required intern year can be satisfied. Even where the college owns the hospital, only a limited number of interns can be provided for at one time; in city hospitals it might be more difficult to place a large number of interns, especially if they are undergraduates, and without responsibility. Some states even have legislated so as to require of the intending intern a license to practice before he may be allowed to qualify. As undergraduate interns in a hospital not owned or controlled by the college, the amount of experience must be discounted by the fact that such interns cannot have either the responsibility or the opportunities of graduated physicians. The latter are, therefore, in most places preferred.

While the hospital year is ideal, then, it is not possible for all colleges to provide the opportunities for the adequate fulfilment, and if the hospital year is to be in a sixth year, further delaying the graduation of the student, it will tend to limit the educational opportunities in medicine to those who are independent in worldly goods or who are resourceful enough to get through.

DR. HENRY SCHWARZ, St. Louis: For years our graduates have taken the fifth year voluntarily, and there are great difficulties in the way of making it compulsory, especially on account of the attitude of the state which forces us to have registered physicians as interns. Students should be graduated after the fourth year and should be given the right to serve as interns, and their privilege to engage in private practice should be dependent on furnishing evidence satisfactory to the State Board that they have served one year as interns in a hospital or have taken some special line of work as indicated by Dr. Jackson. For some years our students have been thrown in contact with patients from the junior year on.

At the conclusion of the discussion, Dr. William J. Means offered the following resolution, which was adopted:

Resolved, It is the consensus of opinion of this body that a fifth year of hospital instruction is desirable as a requirement for the completion of the medical course, and in order to lay the foundation for the adoption of such a course in the fifth year, the Council on Medical Education is requested to inaugurate an inspection of the hospitals of the country as to their facilities for giving instruction to interns and to publish the data thus obtained as it now does of the medical schools.

Medical Education in the South

PRESIDENT EDWIN B. CRAIGHEAD, Tulane University, New Orleans: Mr. Abraham Flexner's report on medical education in the United States and Canada revealed a shocking condition of affairs in the medical colleges of the South. Not even the most mercenary business colleges, apparently, have fallen quite so low as the worst of our cheap and proprietary medical schools. If any large part of the medical fraternity had read this report they would have called for the reorganization of medical education in the South. This report did indeed show medical education in the South at a very low ebb, but not lower, however, than in some other parts of the country, such as in Illinois.

The Flexner treatment is nothing less than heroic, since he thinks six schools are sufficient to meet the needs of the South. It is noteworthy that since the publication of this report, two years ago, five colleges have disappeared.

There is no place in the South or elsewhere for the cheap proprietary medical school. Without endowment, no independent medical school may hope long to survive. Medical colleges having good locations, such as Birmingham, Memphis, Atlanta, Richmond or Little Rock, should appeal to men of wealth for endowment. It is lamentable that not until recently has anything whatever been given for the endowment of medical colleges or chairs of medicine. During the past seventy-five years hundreds of millions of dollars have been given for the endowment of universities and colleges, and of technical schools, but how trifling and miserable the sum given for the endowment of the colleges on which the very life and health and happiness of millions of people depend. The authorities of unendowed medical schools that have no support from the state should announce to the public that without proper support they will be compelled to abandon the work of medical education. When investigations have proved that it costs easily $10,000 per year to conduct any one of the scientific departments of the first two years of medical educa-

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tion in satisfactory fashion, and that it requires $50,000 to $60,000 per year to maintain the work of the first two years, we are forced to believe that the ten medical colleges in the South now having a combined annual income of $226,285, or an average of $2,628 each, have little hope of securing adequate funds, and they should retire from the field of medical education. For the same reasons, seven other colleges, which in 1910 had combined annual incomes of only $56,415, an average of $8,059 a school, should either close their doors or enter at once on a campaign for funds for endowment and equipment.

The University of the State of New York will not grant a charter to the unendowed academic college—but why make exception in favor of the medical college? For medical education of the right sort is far more costly than academic. It may be true that a college having a small endowment may do better work than another college having an endowment of a million or more, but it is equally true that no college can permanently maintain a good faculty and provide teaching facilities without something like adequate endowment. The adoption of such a requirement by this council would cut from recognition the hopelessly bad schools and would prove the best possible incentive to every really promising and aspiring school of medicine.

Permit me now to turn to the problem of entrance requirements in the South. There is, to quote President Pritchett, "no excuse whatsoever for the almost utter absence of standards which is characteristic of that section. Inasmuch as standards in medical education are necessarily tied up with the general educational system, the feasible standard in the southern states for entrance into the medical schools is the same as that for entrance to the academic department; that is to say, high school preparation. From this point progress may be gradual, but it will be inevitable. I venture to point out also that the enforcement of even this standard in the South will bring about the extinction of most existing superfluous schools."

Although the South would warmly welcome any proffer of help for her colleges from the right men of the North, and although such philanthropy would bring in the largest returns, I plead no special consideration for the South in the matter of entrance requirements for her medical schools. We are, moreover, no longer a poor, down-trodden, war-wasted people. The South is growing richer at the rate of $2,000,000 a day. If the present rate of development in the high schools of the South is kept up for a decade longer, we shall find there the best high schools in the country.

The medical colleges of the South should cease to ask special consideration; they should begin very shortly to demand for entrance both a four-year high school course and one of college work. Why not? Is life to them so dear that it must be purchased at the price of dishonor to all high educational ideals, at the price of the betrayal in the interest of private concerns, of the highest welfare of our people, their lives, their health, their happiness? I trust, therefore, that this council will no longer recognize as a reputable medical school any institution in the North or in the South, in the East or in the West, that does not enforce honestly the very reasonable entrance requirements of one year of college work in chemistry, physics and biology, based on a four-year high school education. I venture to believe, moreover, that I am voicing the sentiment of the great mass of the real educators of the South.

Another movement which argues well for the future of medical education in the South is the consolidation of medical colleges. There is no city in the South big enough or rich enough to maintain two good medical colleges. To build, equip and maintain a first-class medical college, in a great city, at least $5,000,000 are needed; in a small city, a much larger sum, perhaps $10,000,000 would be required.

Another indication of an immense forward movement in medical education in the South is the growth of public opinion, favoring on the one hand state aid for medical colleges, and appealing on the other to men of wealth for endowment. Men in the South are giving and will continue to give generously to the support of worthy medical colleges. It is regrettable, however, that none of the independent colleges has secured money for endowment, without which it is difficult, if not impossible, either to maintain high standards, to provide adequate equipment or support for laboratories, or to engage and retain the services of full-time professors.

It is to state aid that we must look for any adequate development of medical colleges in the South. Medical education is not merely a matter of private concern. It touches the welfare of all the people. The bad, the fraudulent medical college is a standing menace to society, more dangerous than an organized band of thieves. The good medical college searching for the cause and the cure of disease, sending out year after year competent physicians and expert sanitarians, is a positive contribution to civilization and deserves the support of philanthropic men. The problem of medical education, however, has grown too vast and complicated, too vital to the high interests of the state, of the nation and of humanity itself to be left to private interests to solve. It is a problem of the state and of the nation—in fact, it is a world problem. No state, no nation, is big enough to wrestle with this gigantic problem. Only organized forces of the whole civilized world are strong enough to vindicate the bold declaration of Pasteur: "It is within the power of man to rid himself of his parasitic disease."

It is not enough to exterminate the bubonic plague in San Francisco, or yellow fever in New Orleans, or cholera in New York, or small-pox in Baltimore, or typhoid in Washington, or tuberculosis in Chicago. These diseases and others must be everywhere exterminated so that the whole habitable earth may become a decent abode for man. It could easily be accomplished if international arbitration in the settlement of disputes between nations could be substituted for war; if the energy, the heroism, the money now consumed in maintaining armies and building navies could be turned to the promotion of science and the conquest of disease.

An international congress of educators and scientists should be brought together to frame national and international programs for the promotion of the hope, the health, the happiness of mankind. Professional politicians, political theorists, representatives of special interests, ignorant and intolerant reformers seeking by legislation to make wicked men angels, misguided enthusiasts and faddists with medical and social panaceas, Chauvinists screaming ever for bigger standing armies and more powerful navies—these are they who for ages have sought and still seek to shape legislation and to make their voices heard in the councils of mankind. But a new era is dawning. Slowly but surely the demagogue, the hired attorney, the charlatan, is being relegated to the rear, and the voice of Science and the message of Reason are being heard even in the halls of legislation and in the congresses of mankind.

A hundred and sixty million dollars for pensions for war veterans, most of whom have never smelt the smoke of battle; a hundred millions for battleships to defend ourselves against the far-distant Jap, and not even one million to protect ourselves against preventable diseases that sweep away annually six hundred thousands of our people! Ten million for a single dreadnaught and nothing whatever from the national government for the support of medical colleges or the training of sanitarians! Millions for the cure and prevention of disease among hogs and horses and chickens and cattle, and nothing for the prevention of diseases that mercilessly destroy helpless children! These conditions are too serious to endure in an enlightened age. Let us drive from the halls of Congress those representatives who belong to antediluvian ages, and put in their places scientists like Welch, Dock, Wiley and university men of wide knowledge, like Woodrow Wilson. Philosophers, lovers of truth, scientists, investigators—men like Liebig and Pasteur and Helmholtz—the really great men of the world who have enlarged the boundaries of knowledge and extended man's dominion over the earth; these are they to whom, in the main, progressive governments must and will look for counsel in their efforts to solve the vast and complex problems of civilization and democracy.

(To be continued)

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

COMBINED OFFICE AND RESIDENCE

N. Albert York, M.D.
LISBON, IA.

During my first few years of practice I rented office rooms upstairs in a business block, and had my residence in another part of town. This arrangement I found to be anything but satisfactory. I was obliged to maintain two telephones, heat my home and my office with two heating systems, keep office help or allow my office to go unattended in my absence, sometimes for many hours. My horses when not in use were in the barn at my residence, and when I was called in the country during the day it became necessary to carry my grips and whatever I needed to my residence, or make a stop at the office for them after the team was hitched, with the necessary delay. I found, also, that night callers often found me short of things which they really needed, and of which I had plenty at the office.

But the objection that was greater than all the others combined was the fact that I had become merely a boarder at

Fig. 1.—The office and residence of Dr. York.

my home, and that my wife was compelled to remain there most of the time to care for our three children and attend to the various household duties, rearing the family with the very scant assistance I could give her, as I found it necessary to be at my office in the evenings.

In addition to these household cares, I frequently found it necessary to call on her to assist me at the office, in operative and gynecologic work, as well as difficult obstetric cases in the country, until increasing contact with and interest in the work has made of her an invaluable assistant.

I sought advice from my best friends, most of whom said it was inadvisable to try to combine home and office; but in the face of their strenuous objections and predictions of failure, I purchased my present location, remodeled it to suit my convenience, added much to it, and have for the past ten years proved very conclusively to my own satisfaction, and to that of my friends, that such an arrangement for a doctor's family in a small town is very close to ideal. The house is large enough for an ordinary family apart from office rooms. Hot water is always easily obtained from the kitchen range tank, and instruments are readily sterilized by boiling over the kitchen fire. A neat medicine cabinet is located in the north end of the operating-room. Ample light is admitted by two large windows in the west.

Entrance to other rooms by way of vestibule and to second floor by wide open stair. The entire house and office is heated by furnace of ample capacity, and lighted by a twenty-four-hour electric light system. The front rooms are joined by wide openings and colonnades. The interior finish is in oak, with oak floors. Ceilings are 9 feet 6 inches high.

The interior arrangement insures good ventilation, and consequently I am seldom called on to prescribe for the family. I have two telephones on the same circuit, one in the office and a desk telephone on a stand at my bedside, so that night messages may be answered without the inconvenience of even turning over in bed. The office telephone is located near the vestibule so that it can be readily heard and reached from the adjoining rooms by any member of the family, one of whom is always on duty to answer the telephone, or meet a patient in my absence when the ring of the automatic electric office door bell announces that someone has entered the waiting room.

I keep a comprehensive card index system, in which each prescription is recorded.

I think that it is true that those suffering from venereal diseases prefer the secluded office of the doctor who bids for that kind of practice, and as far as I am concerned I would much rather they did so, as their presence in one's reception

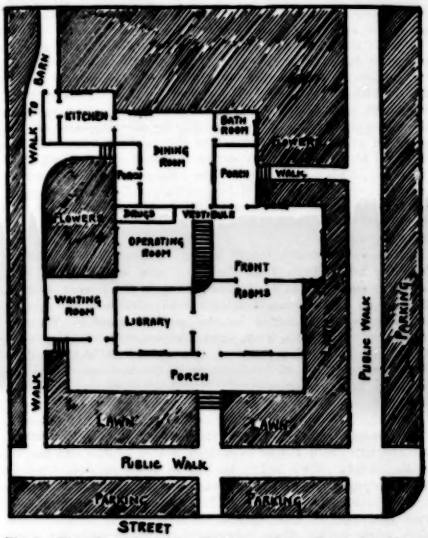

Fig. 2.—First floor plan of Dr. York's combined office and residence.

room is usually obnoxious to the more sensitive and very much more desirable class of gynecologic patients.

There is one change I could make in the accompanying plan which would improve the office apartments, and that would be to make a wide opening between the operating-room and library, throwing the two rooms together and thus give an abundance of room for laboratory and office appliances.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Seventh Month—Third Weekly Meeting

DISEASES DUE TO PREGNANCY

TOXEMIA[1]

SOURCES OF POISON: Infections from air passages, intestines, endometrium, urinary tract.

SYMPTOMS: Malaise, dizziness, headache, nausea, vomiting, edema.

TREATMENT: Rest, diet, elimination.

1. Ewing: Am. Jour. of Obstetrics, 1905, ll, 145. Edgar: New York Medical Journal, May 5, 1906.

EMESIS[2]

Degrees of vomiting, frequency.

VARIETIES: Toxic, reflex and neurotic.

CAUSES: 1. Increased sensitiveness of nerve centers, with splanchnic congestion. 2. Peripheral irritation: Uterus; malpositions, inflammations, tumors. Gastro-intestinal tract. Hysteria.

TREATMENT: Preventive.

MILD CASES: Prophylaxis, diet, medicinal.

HYPEREMESIS: Diet, rest, careful nursing. Rectal saline solution, nutritive enemata. Hypodermoclysis. Gastric lavage. Medicinal treatment. Induction of abortion.

ECLAMPSIA[3]

Frequency.

CONTRIBUTING CAUSES: Primiparity, twin pregnancy, hydramnios, constipation, heredity, epidemic influence.

IMMEDIATE CAUSES: Metabolic and fermentative poisons. Placental and fetal poisons. Injury to liver and kidney from placental emboli. Significance of albumin and diminished urea.[4]

CLINICAL HISTORY: Preeclamptic period, onset, convulsions.

TREATMENT:[5] Threatened eclampsia.

CONVULSIONS: Antepartum, intrapartum, postpartum. Saline solution, sweating, purgation, bleeding. Physiological action and use of (a) morphin, (b) veratrum viride, (c) chloroform. Abdominal or vaginal section.

MEDICAL DISEASES COMPLICATING PREGNANCY[6]

HEART DISEASE: Frequency. Effect of pregnancy, effect on pregnancy, effect of labor, of puerperium. Prognosis. Treatment: (a) pregnancy, (b) labor.

PULMONARY TUBERCULOSIS:[7] Effect on pregnancy. Effect of pregnancy. Management. Question of marriage.

NEPHRITIS: Dangers of pregnancy.

Neuralgias and Neuritis.

GONORRHEA: Acute and chronic, effect on child, on puerperium. Symptoms. Treatment.

SYPHILIS: Infection (a) before conception, (b) at time of conception, (c) after conception, (d) paternal infection. Treatment in each case.

SURGICAL AND GYNECOLOGIC AFFECTIONS COMPLICATING PREGNANCY

Hernia and Appendicitis. Traumatisms. Surgical infections. Uterine retrodisplacements. Prolapse. Anteflxation. Cancer of cervix. Fibromyomata of uterus.[8] Ovarian tumors.

2. Williams: Am. Jour. Med. Sciences, 1906, cxxxii, 343-354. Williams: Surgery, Gynecology and Obstetrics, July, 1905.

3. Hirst: Proceedings Phila. Co. Med. Society, Dec. 31, 1903, and Feb. 29, 1904. Holland: Jour. Obstetrics and Gynecology of the British Empire, October, November and December, 1909. Welch: THE JOURNAL A. M. A., Oct. 23, 1909.

4. Ewing and Wolf: Am. Jour. of Obstetrics, 1907, lv, 280-336. Stewart: Am. Jour. of Obstetrics and Diseases of Women, January, 1905.

5. Berkeley: Jour. Obstet. and Gyn. of British Empire, March, 1904.

6. French: British Medical Journal, May 2, 9 and 16, 1908. Cameron: Am. Jour. of Obstetrics, September, 1908.

7. Bacon: THE JOURNAL A. M. A., Oct. 7, 1905, p. 1067.

8. Routh: British Medical Journal, Oct. 3, 1903; Progressive Medicine, September, 1904. Smyley: British Medical Journal, Jan. 23, 1909.

Duration of Anaphylaxis.—The duration of the anaphylactic state, that is, the state of hypersensitiveness, may be extremely long. It has been found by Rosenau and Anderson to persist in guinea-pigs for more than three years; in fact, in these animals it would appear that once developed it lasts for the rest of the animal's lifetime. A somewhat similar phenomenon is seen in men in connection with tuberculosis with regard to the cuti-reaction. A patient who has had a tuberculous infection, though mild and transient, may give a cuti-reaction with tuberculin for years, perhaps for the rest of his life. We have no definite evidence as to the length of time for which serum anaphylaxis may persist in man.—Emery in *Brit. Med. Jour.*

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

MAINE: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

MASSACHUSETTS: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

WYOMING: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Higher Standards and Better Physicians

The problems of medical education and licensure are dealt with at length in the last report of Mr. Andrew S. Draper, commissioner of education to the New York Board of Regents. A part of this report has already been commented on.[1] The report shows that in its attempt to solve these problems New York is pursuing a sound policy, namely, that medical practice laws are made to protect the people against incompetent doctors and not to provide special privileges or special educational standards for any particular medical sects or systems of healing.

Mr. Draper says that the responsibility for the educational requirements for admission to the medical profession rests with the Board of Regents.

"The interests of any individual, of any medical institution, or of any school or cult in medical practice, have little to do with the matter. It is a matter of protecting and aiding society at large, and every member of it in particular, just so far as that can be done. It will not do to say that people may employ such physicians as they will; the state certifies the character and competency of physicians. Ordinarily people cannot know about the intricacies of medical procedure, and the state is bound to exercise its superior knowledge and power to protect everyone against fallacy and greed. It will not do to say that the poor cannot expect the service of the most highly educated and experienced physicians; none is so poor that he may not expect us to set up standards and procedure which will make certain that every certificated physician has a firm grasp on the sciences that are now fundamental in medicine. We might be patient if it were only a matter of the ignorance of a former generation passing away, but we cannot be unaware of the fact that there are serious loopholes in our system for educating and admitting physicians to practice, and that there are managers of schools and leaders of cults, as well as endless numbers seeking admission to the profession, who will take advantage of every opportunity for admission without reference to the moral soundness and professional knowledge of the novitiate or the repute and honor of the guild."

Thus Mr. Draper speaks with conviction against one of the most glaring defects in our present methods of licensure—that of providing special privileges for certain medical cults, thus opening the flood-gates so that hoards of illiterate and untrained doctors may secure the right to practice medicine. He clearly answers the arguments so frequently advanced against one portal of entry to the medical profession and shows that "a firm grasp on the sciences that are now fundamental in medicine" is the sine qua non for all practitioners alike.

Amalgamation of Leland Stanford Junior University and Cooper Medical College

Dr. R. L. Wilbur, dean of the Department of Medicine of Leland Stanford Junior University, states that Cooper Medical College has transferred all of its property holdings in San Francisco and elsewhere in California to Leland Stanford Junior University, of which it will hereafter be a part. The Leland Stanford Junior University brought a friendly suit before the Superior Court recently against Cooper Medical College for the sole purpose of clearing any defect there might

1. THE JOURNAL A. M. A., Feb. 24, 1912, p. 582.

be in the titles of the college to the properties. On the showing that no one else asserted claim to the lands, the judgment of the court decreed Leland Stanford Junior University the rightful owner. The judgment includes the following: lots at Sacramento and Webster streets, where the college has been located for years, lot at Buchanan and Clay streets, lot at Folsom and Main streets, and 2,560 acres of land near Fresno, Cal. Stanford University now owns the Lane Hospital, the Nurses' Home, the Clinical Building and the new Lane Library which is being built, at an expense of about $125,000, on land immediately adjoining the other buildings. The lot at Buchanan and Clay streets will probably be used for a maternity hospital, while the lot on Folsom street and the lands near Fresno, together with certain bonds that have been previously transferred to Stanford, will form part of the endowment of the Lane Library.

Illinois July and October Reports

Dr. James A. Egan, secretary of the Illinois State Board of Health, reports the written examinations held in Chicago, July 25-27 and October 26-28, 1911. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. At the examination held July 25-27, the total number of candidates examined was 106, of whom 59 passed, 42 failed, and one withdrew. Four candidates did not complete the examination. The following colleges were represented:

College	Year Grad.	Total No. Examined.
PASSED		
Bennett Medical College	(1911)	1
Chicago College of Medicine and Surgery	(1911)	4
Hahnemann Med. College and Hospital, Chicago	(1911)	2
Jenner Medical College	(1911)	1
Northwestern University Medical School	(1911)	20
Rush Medical College	(1910, 1) (1911, 12)	13
College of P. and S., Chicago (1898, 1) (1908, 1) (1910, 1) (1911, 9)		12
Harvard Medical School	(1911)	1
Univ. of Mich., Dept. of Med. and Surg.	(1910)	1
Barnes Medical College	(1911)	1
St. Louis University	(1911)	1
Cleveland College of Physicians and Surgeons	(1911)	1
University of Texas	(1910)	1
FAILED		
Bennett Medical College	(1910, 2) (1911, 4)	6
Chicago College of Medicine and Surgery	(1911)	6
Coll. of Med. and Surg., P.-M., Chicago	(1908) (1911)	2
Hahnemann Med. Coll. and Hospital, Chicago (1910, 1) (1911, 3)		4
Jenner Medical College	(1911)	2
Northwestern University Medical School	(1911)	6
Coll. of P. & S., Chicago (1909, 1) (1910, 2) (1911, 3)		6
Reliance Medical College	(1911)	1
Rush Medical College	(1911)	1
Keokuk Med. Coll., Coll. of P. and S.	(1908)	1
Hospital College of Medicine, Louisville	(1904)	1
University of Louisville	(1911)	2
Barnes Medical College	(1910)	1
St. Louis College of Physicians and Surgeons	(1910)	1
St. Louis University	(1907)	1
University of Athens, Greece	(1891)	1

At the examination held October 26-28, the total number of candidates examined was 136, of whom 80 passed and 53 failed. Two candidates did not complete the examination. The following colleges were represented:

College	Year Grad.	Total No. Examined.
PASSED		
Bennett Medical College	(1911)	7
Chicago College of Medicine and Surgery	(1911)	10
College of Medicine and Surgery, Physio-Medical, Chicago	(1910) (1911)	2
Hahnemann Med. College and Hospital, Chicago	(1911)	3
Hering Medical College	(1910)	1
Illinois Medical College	(1910)	1
Jenner Medical College	(1910, 1) (1911, 2)	3
Northwestern University Medical School	(1910, 2) (1911, 14)	16
College of Physicians and Surgeons, Chicago (1910, 2) (1911, 9)		11
Reliance Medical College	(1909) (1911)	2
Rush Medical College	(1911)	7
University of Louisville	(1907) (1911)	2
Detroit College of Medicine	(1890)	1
Univ. of Minn., Coll. of M. and S.	(1901)	1
Barnes Medical College	(1910, 1) (1911, 3)	4
St. Louis University	(1911)	1
Albany Medical College	(1911)	1
University and Bellevue Hospital Med. College	(1911)	1
Woman's Medical College of Pennsylvania	(1907)	1
Meharry Medical College	(1909)	1
Queen's University, Kingston, Ontario	(1909)	1
Royal University of Catania, Italy	(1901)	1
University of Toronto, Ontario	(1910)	2
FAILED		
Bennett Medical College	(1910, 2) (1911)	3
Chicago College of Med. and Surg.	(1910, 1) (1911, 9)	10
College of Medicine and Surgery, Physio-Medical, Chicago (1905, 1) (1908, 1) (1910, 1) (1911, 2)		5
Hahnemann Med. College and Hospital, Chicago	(1911)	1
Hering Medical College	(1910) (1911)	2
Illinois Medical College	(1908) (1910)	2
Jenner Medical College	(1905) (1911)	2
National Medical University, Chicago	(1909) (1910)	2
Northwestern University Medical School	(1911)	3
College of Physicians and Surgeons, Chicago (1910, 2) (1911, 2)		4
Reliance Medical College	(1911)	2
Rush Medical College	(1911)	1
Indiana University	(1910)	1
Keokuk Med. Coll., Coll. of P. and S.	(1908)	1
Sioux City College of Medicine	(1906)	1
Hospital College of Medicine, Louisville	(1904) (1908)	2
Louisville National Medical College	(1909)	1
University of Louisville	(1908)	1
Ensworth Medical College	(1909)	1
Barnes Medical College	(1910, 1) (1911, 2)	3
St. Louis College of Physicians and Surgeons	(1910)	1
St. Louis University	(1907)	1
University Medical College, Kansas City	(1911)	1
Eclectic Medical College, Cincinnati	(1911)	1
University of Pennsylvania	(1869)	1

Book Notices

UNTERSUCHUNGEN ÜBER DIE STRUKTUR DER BLUTZELLEN. Von Dr. Alfred v. Decastello, Assistent, und Dr. Alexander Krjukoff (Moskau) derzeit Hospitant der medizinischen Klinik in Innsbruck. Paper. Price, $4. Pp. 119, with illustrations. Berlin: Urban and Schwarzenberg, 1911 (New York: Rebman Co.)

This monograph is the result of the personal hemocytologic studies of the authors, on which much time and care have been expended. Although the conclusions may not be universally accepted, they are deserving of much consideration. The method of staining used by these workers is a combination of the Jenner and Giemsa stains, a method advocated by Pappenheim and one giving extremely panoptic results. Control studies were made with a variety of other staining methods. This work is especially commended to those who are interested in the histology of the blood-cells. It is only through such isolated investigations as these that our knowledge may be rounded into that complete whole which is so necessary before the direct application may be made to the solving of the problems of the pathologic variations in the blood-cells. The style of presentation is clear, concise and convincing. The illustrations are excellent.

A TEXT-BOOK OF MATERIA MEDICA FOR NURSES. Including Therapeutics and Toxicology. By George P. Paul, M.D., Town Health Officer, Round Lake, New York. Second Edition. Cloth. Price, $1.50 net. Pp. 282. Philadelphia: W. B. Saunders Co., 1911.

In this book the drugs are arranged alphabetically. There is a brief description of each drug, with dosage, method of administration, action, therapeutic indications, toxic action, if any, and antidotes. In this edition a chapter has been added on practical therapeutics, which includes baths, hypodermoclysis, gastric lavage, hypodermic medication, antiseptics and disinfectants, disinfection and topical medication. Antitoxins, serums and vaccines are also briefly discussed. Especially valuable are the tables of equivalents and solution percentages, the lists of synonyms and the formulas for lotions and solutions in every-day use. The book is well adapted to the use of nurses.

A MANUAL OF FEVERS. By Claude Buchanan Ker, M.D., F.R.C.P., Medical Superintendent, City Hospital, Edinburgh. Cloth. Price, $2.50. Pp. 314, with illustrations. New York: Oxford University Press, 1911.

This manual is especially intended as a preliminary course of reading for students about to take the required course of "Fevers" at a British isolation hospital. It is therefore of necessity somewhat elementary. The clinical history of the various exanthemata is briefly described and some suggestions as to treatment are added. It is interesting to note that the infective character of the scales in scarlet fever is regarded of decidedly minor importance. The information in this little book is thoroughly up to date, and it will well repay perusal by those who wish to refresh their knowledge of these subjects.

V. 5
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Medicolegal

Duty of Carriers as to Protecting Passengers Against Contagious Diseases

(Bogard's Administrator vs. Illinois Central Railroad Co. (Ky.), 139 S. W. R. 855)

The Court of Appeals of Kentucky affirms a judgment for the defendant company in this case, which was brought to recover damages for the death of a child from measles, alleged to have been contracted from another passenger on one of the defendant's trains. The evidence tended to show that a man entered the car and took a seat next to and in the rear of that occupied by the child and its mother; that his fact manifested an eruption much like measles, and that he leaned forward with his head resting much of the time on the back of their seat; also, that the conductor when he took up the man's ticket raised his hat as if to see his face. But, if the man had the measles, it did not appear from the evidence that the conductor discovered it. It was true that the inference of such knowledge, arising from his lifting the hat of the passenger as his head rested on the back of the seat in front of him, might be indulged. But it was equally as reasonable, the court says, to infer that the conductor supposed the passenger was asleep, and raised his hat for the purpose of awakening him, that he might take up his ticket; and, if so, a cursory view of his face under the circumstances might not have enabled the conductor, unskilled as he was in diagnosing diseases, to discover that its appearance was unusual, or indicative of his being affected with measles.

The trial judge instructed the jury, in substance, that, although they might believe from the evidence that the child died of measles contracted from a fellow passenger on the defendant's train, they should nevertheless find for the defendant, unless they further believed from the evidence that the conductor in charge of the train knew or discovered that such passenger was afflicted with the measles, in time, and by the use of ordinary care, to have prevented the child from contracting the disease, and at the same time protect, as far as the use of ordinary care would enable it to do, the health of the passenger afflicted with the measles. In the Supreme Court's opinion, the instructions correctly stated the law.

No liability should be made to attach to a railroad company in a case like this, in the absence of proof that the officers or servants in charge of its train, on which the person claiming to have been injured was being carried as a passenger, had some knowledge or notice that a passenger thereon was afflicted with a contagious disease and then failed to promptly exercise ordinary care to prevent contagion to other passengers on the train, such as the circumstances would admit of, considering the duty of the railroad company, both to the passenger afflicted with the contagious disease and the passenger entitled to protection against contagion therefrom.

The question here was:. When did it become the duty of the defendant's conductor to protect the child from the injury complained of? Obviously, the moment the conductor discovered there was a passenger aboard the train afflicted with the measles, a contagious disease, calculated to endanger human life or health. Adoption by the courts of the rule of diligence contended for by the plaintiff's counsel would require all carriers of passengers to keep on each of its trains, or at each of its passenger stations, a skilled physician to examine every person obtaining or demanding transportation, to avoid the possibility of receiving a passenger affected with a contagious disease. Neither innkeepers, proprietors of theaters, schools, nor churches, have ever been subjected to such an unreasonable rule of diligence, and no sound reason is perceived for applying it to carriers of passengers.

A common carrier, independently of the contractual relation, is under a general obligation to receive and carry on its trains all proper persons who apply for transportation and offer to pay the regular fare for such service. By the term "proper persons" is meant persons whose status or condition apparently entitle them to be carried as passengers. On the other hand, the carrier has the right to refuse to receive or carry as passengers, improper persons; that is, persons whose condition or conduct is such, from intoxication, disorderly conduct, contagious diseases, or other things, as to make their presence on the train dangerous to the lives or health of other passengers. Likewise, if the condition or conduct of a person, after being received as a passenger, becomes such as to endanger the lives or health of other passengers, or to unreasonably annoy or offend them, it is the right and duty of the carrier's servants in charge of the train, on receiving notice thereof, to eject such offending person from the train; but in doing so they must also exercise due care to protect his health and person from danger or unnecessary discomfort. In such a case the carrier is bound to exercise a reasonable discretion, according to conditions as they reasonably appear at the time.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

February, IX, No. 2, pp. 129-272

1 *Studies of Malaria in Panama: III. The Etiology of Erythrolytic Hemoglobinuric Type of Blackwater Fever. W. V. Brem, Los Angeles.
2 *Rôle of Acidosis of Tissues as Factor in Production of Attack in Paroxysmal Hemoglobinuria. O. Berghausen, Cincinnati.
3 *Observations on Fluid Contents of Cyst Occupying Epigastric Region of Abdomen. H. A. Christian, Boston.
4 *New Method of Determining Venous Blood-Pressure. A. A. Howell, Philadelphia.
5 Subacute and Chronic Nephritis as Found in One Thousand Unselected Necropsies. W. Ophüls, San Francisco.
6 *Pneumographic Study of Respiratory Irregularities in Meningitis. L. A. Conner and R. G. Stillman, New York.
7 *Study of Streptococcus Antibodies in Scarlet Fever, with Special Reference to Complement Fixation Reactions. J. A. Kolmer, Philadelphia.
8 Osseo-Albumoid as Possible Precursor of Bence Jones Protein. J. Rosenbloom, New York.
9 Spontaneously Precipitated Bence Jones Protein in Urine. J. Rosenbloom, New York.
10 *Simple Instrument for Determining Coagulation-Time of Blood. W. W. Duke, Kansas City, Mo.
11 Neuroserologic Findings in Tabes, General Paresis, Cerebrospinal Syphilis and Other Nervous and Mental Diseases. D. M. Kaplan and L. Casamajor, New York.

1. Malaria in Panama.—Brem has studied twenty-seven cases of pernicious malaria with reference to hemoglobinuria. In twenty-two of these hemoglobinuria was demonstrable. In eight instances there were traces only of hemoglobin in the urine; in seven the gross appearance of the urine suggested the probability of hemoglobin; in the other seven cases the hemoglobinuria was of blackwater intensity. Four of the five patients without hemoglobinuria were comatose with but few parasites in the peripheral blood; two died and at autopsy the brain capillaries were found to be thrombosed and contained numerous parasites, while there were but few in the spleen and bone marrow. The fifth patient had a heavy peripheral infection, about 9 per cent. of the corpuscles containing parasites. He was very ill, but did not become comatose and no hemoglobin could be demonstrated in his urine. A consideration of pernicious malaria with hemoglobinuria, and the transition cases between it and erythrolytic hemoglobinuria, strongly inclines Brem to believe that both forms are due directly to an hemolysin produced by the malarial parasite. The estivo-autumnal organism is nearly always the one concerned. The mechanisms of the production of the two types are, it is thought, essentially the same, but differ markedly, as a rule, in degree. The small amount of experimental evidence so far collected tends to confirm the above views. One of two explanations may account for the irregularity and infrequency of hemoglobinuria in malarial infections:

A. Different strains of parasites may generate hemolysin that varies in quantity or intensity with the strain, or with environment that is inimical to the parasites, such as quinin or relative immunity to malaria resulting from previous infections.

B. An antihemolysin may be formed, as a rule, during the incubation period of malarial infections, when gradually increasing doses of parasitic hemolysin are presumably being liberated. In this case

quinin, exhaustion, exposure, etc., may inhibit the production of antihemolysin, especially in debilitated persons who have suffered from previous malaria. In pernicious infections, antihemolysin formation may be good, but the production of hemolysin by enormous numbers of parasites may be sufficient to more than neutralize it.

2. **Acidosis of Tissues and Production of Paroxysmal Hemoglobinuria.**—In their experiments the authors noticed that the corpuscles of patients suffering from paroxysmal hemoglobinuria were somewhat less resistant to an atmosphere of carbonic-acid gas, as compared with corpuscles from a normal individual. This difference was not very marked, however. The chief difference lies in the blood-serum of the patient.

Contrary to the findings of Hymans, it was found that normal corpuscles in normal salt-water suspension were also, although more slowly, hemolyzed in an atmosphere of carbonic-acid gas. Sodium citrate solution, strength 1.5 per cent., was sufficient to prevent hemolysis of both the patient's and normal human corpuscles in an atmosphere of carbonic-acid gas at room temperature. Apparently the salt concentration of the blood-serum is the factor which determines whether the corpuscles shall be hemolyzed or not. Normal serum has sufficient salt dissolved to prevent hemolysis of both the patient's and normal corpuscles in an atmosphere of CO_2 at room temperature. The paroxysmal attacks have been variously ascribed to the action of cold, congestion and trauma, locally or remotely produced. It would appear that changes locally in the tissues must be necessary before a state of hemoglobinemia or hemoglobinuria can be produced. In view of the fact that cold, trauma and passive congestion may all lead to an attack, and since the three conditions are associated with the production of an excessive acidity of the tissues, it is not unreasonable to suppose that the organic acids thus formed play some part directly in the production of the attacks. The corpuscles may be less resistant, they may be subject to the action of a specific hemolysin, and yet an additional factor acting locally in the tissues seems necessary for an attack to be produced. In the presence of the proper salt concentration, the corpuscles are protected against the hemolytic action of any organic acids. This naturally suggests the giving of neutral salts as a therapeutic agent, to prevent the onset of attacks in patients suffering from paroxysmal hemoglobinuria.

3. **Fluid Contents of Cyst of Epigastric Region of Abdomen.**—Fluid was withdrawn by Christian from a cyst occupying the epigastric region in a man aged 42, which had developed as follows: Twelve months previous to admission in the hospital ascites appeared and a simple ascitic fluid was withdrawn on three occasions during a period of two months. Following the tappings a constant gnawing pain with occasional sharp exacerbations developed in his upper abdomen. Four months before admission to the hospital a tumor mass appeared in his upper abdomen, to disappear after a month and a half. Five weeks before admission this mass reappeared and persisted. On admission there was found a large bulging tumor extending from beneath the ribs to 1½ inches above the umbilicus, elastic, smooth, moving slightly with respiration, apparently a cyst crowding the stomach up and the transverse colon down. At operation this was found filled with a slightly viscid fluid, dark brownish-black in color, containing changed blood. The wall of the cyst showed granulation tissue and no epithelium.

The fluid from the cyst was slightly alkaline, and did not reduce Fehling's solution. It gave no trypsin reaction, and did not digest coagulated egg albumin at body temperature, either as it came from the cyst or after the addition of scrapings from the duodenum. In the thermostat at body temperature at the end of twenty-four hours it had acquired the power of reducing Fehling's solution, and previous boiling did not prevent this reducing substance from appearing. In the thermostat, however, at 60 C. no such reducing substance appeared. The addition of yeast to the fluid caused fermentation with the production of gas. Preservation at a temperature slightly above freezing for one month had no appreciable effect on the reactions of the fluid. Until the fluid was placed in the thermostat at 37.5 C it still did not reduce Fehling's solution. At the end of three and a half months at a temperature slightly above freezing the fluid had acquired a slightly foul odor and still did not reduce Fehling's solution, and now when placed in the thermostat at 37.5 C. there was but a slight production of a reducing substance.

4. **Determining Venous Blood-Pressure.**—A way to determine the first increase in the volume of the forearm was in Howell's opinion the real problem to be solved. This he has done by devising a special cuff, similar in general to the cuff of the arterial sphygmomanometer, but differing in that it is patterned to fit the tapering forearm, and in that it is made of light rubber dam with a light inelastic covering.

6. **Respiratory Irregularities in Meningitis.**—Irregularities in the respiratory rhythm were observed by Conner and Stillman at some time in the course of the disease in all of the thirty-two cases of tuberculous meningitis and in all but two of the eleven non-tuberculous cases. They claim that these irregularities often appear early in the disease and in most cases are to be seen much of the time throughout the course of the illness. Toward the end of life, however, the breathing is apt to become very rapid and quite regular. The respiratory irregularities could be grouped into three fairly distinct classes, although intermediate forms were often met with. The three classes are: (a) The type of Cheyne-Stokes; (b) Biot's meningitic type, and (c) an undulatory type.

Cheyne-Stokes breathing was seen in 53 per cent. of all the cases, and in 63 per cent. of the cases in children. It was of more frequent occurrence among the cases of tuberculous meningitis than among the nontuberculous ones.

Biot's breathing was observed in 27 per cent. of the forty-three cases. Its incidence among the adults and among the nontuberculous cases was considerably greater than among the children and the tuberculous cases. It was seen at all stages of the disease and occasionally was met in cases which at other times showed the Cheyne-Stokes type.

The third group of respiratory irregularities, designated as the undulatory type, showed no apneic pauses, but was characterized by undulatory and more or less rhythmical variations in the rhythm and force of the respirations and in the tonicity of the respiratory muscles. This form of respiratory disturbance was seen at some time in the course of almost every case.

No distinct relationship could be detected between the presence of respiratory irregularities and irregularities in the pulse; nor were the respiratory arhythmias dependent on any special mental state such as stupor or coma. The diagnostic significance of respiratory irregularities varies with the type. Biot's breathing, when it occurs, may be regarded as almost pathognomonic of meningitis. The Cheyne-Stokes type has little or no diagnostic value in adults, but in children it is seen much more frequently in meningitis than in any other condition, and, if associated with other suggestive symptoms, should always arouse grave suspicion of that disease. The undulatory type of irregularities is found too often in other diseases to be of much value in the diagnosis of meningitis.

7. **Streptococcus Antibodies in Scarlet Fever.**—Kolmer found it possible to raise the streptococco-opsonic index by the injection of organisms killed by an exposure to 60 C. for one hour. This increase is very slight with three or less administrations and becomes apparent only after a relatively large number of injections.

The increase in the quantity of opsonin after three injections is so slight as to make the likelihood of establishing an immunity against streptococcic infection very dubious.

The opsonins were more or less specific toward the strains used in the process of immunization.

Streptococcus agglutinins are produced slowly by experimental immunization and the quantity is quite variable.

These agglutinins are apparently non-specific in character and of no value in differentiating streptococci.

They were demonstrated in 12.5 per cent. of scarlet fever patients but only in comparatively low dilutions of serum.

There was no relation between agglutination and complement fixation antibodies or betwen agglutinins and opsonins.

10. **Instrument for Determining Coagulation-Time of Blood.**—Duke's instrument consists of a slide on which are mounted,

with balsam, two glass disks 5 mm. in diameter. With this instrument, he says the coagulation-time can be determined comparatively; that is, blood from a patient can be taken up on one disk, blood from a normal individual on the other; the two coagulation-times can then be determined simultaneously and the results compared.

Virginia Medical Semi-Monthly

February 9, XVI, No. 21, pp. 521-548

12 Waste. C. Thompson, Jacksonville, N. C.
13 Surgical Conditions of Childhood J. T. Buxton, Newport News.
14 Rational Treatment of Post-Partum Hemorrhage Based on Its Mechanism. G. T. Harrison, Charlottesville.
15 Association of Transitory Physical Signs in Lungs with Incipient Tuberculosis. M. E. Lapham, Highlands, N. C.
16 Value of Vinegar in Obstetric Work. L. Elliot, Washington, D. C.
17 Congenital Foramen in Mesentery. F. P. Smart, University.
18 Vaccine Therapy in Children. J. W. White, Norfolk.
19 Typhoid. R. T. Akers, Alum Ridge.

Journal of Nervous and Mental Disease, Lancaster, Pa.

February, XXXIX, No. 2, pp. 73-143

20 *New Symptom-Complex Due to Lesion of Cerebellum and Cerebello-Rubro-Thalamic System. C. K. Mills, Philadelphia.
21 Leontiasis Ossea-Acromegaly and Sexual Infantilism. H. H. Hoppe, Cincinnati.
22 Sensory Tract in Relation to Inner Capsule. W. G. Spiller and C. D. Camp, Philadelphia.
23 *Tumor of Corpora Quadrigemina. H. H. Hoppe, Cincinnati.

20. **New Symptom Complex.**—A summary of an examination made by Mills, October 8, 1911, about three weeks before the patient's death gives the special symptom-complex from which this patient suffered for more than four years, this not changing durnig all that time. The syndrome was clear cut and very definite. In the left upper extremity ataxia was very marked as shown for instance by the finger-to-nose test. As the hand approached the face in the test the movements became very jerky and it was scarcely possible for the patient to touch his nose. In the left lower extremity ataxia was also marked, as shown by the heel-to-knee test. Power in both upper and lower limbs was, however, preserved. Careful tests showed that sensation in all its forms was fully retained on the entire left half of the body, but was lost to pain, extreme heat and extreme cold on the right half of the body—face, trunk, upper and lower extremities. Tactile discrimination was also greatly impaired as shown by the compass test. Light touch was preserved. The senses of deep pressure and of position and passive movement were normal on both sides and the patient showed no astereognosis in either the right or the left hand. Deafness in the right ear was complete. Voluntary movements in the face were entirely preserved, as demonstrated by such usual tests as wrinkling the forehead, closing the eyes, drawing up the face first to one side and then to the other, and then on both sides as in showing the teeth. In laughing, as had been shown in many other examinations and by the moving picture method, the patient's face failed to move on the right side. The patient died Oct. 31, 1911. The brain closely examined by the naked eye showed a smallness of the branches of the left superior cerebellar artery and a depression over the left dentate nucleus, but nothing else externally, at least nothing of importance as regards the symptomatology above described. The brain was sectioned in several places with care so as not to interfere with subsequent microscopic investigations by serial sections. The cuts revealed a destructive lesion involving the left dentate nucleus and the cerebellum above this nucleus, including also the superior cerebellar peduncle. Degeneration was also evident to the naked eye in the right nucleus ruber, which body was much smaller than the left nucleus ruber. Many sections since made, show a well-marked destructive lesion and secondary degeneration involving not only the dentate nucleus and neighboring cerebellar substance, but also the left superior cerebellar peduncle, to and including the nucleus ruber of the opposite side.

23. **Tumor of Corpora Quadrigemina.**—The chief symptoms and signs in Hoppe's case were: Double vision, staggering gait, falling to the right, gradual loss of vision, ending in three to four months in total blindness, sudden attack of rigidity in all muscles, falling to ground, without loss of consciousness, equal pupils, atrophy of optic nerves, no light response in pupils, all movement lost in left eye, except downward movement, all movement lost in right eye, except inward and downward movement, slight ptosis of both lids, normal hearing, extreme static ataxia with retropulsion, so that patient was finally unable to walk at all, motion and sensation and reflexes not affected. There were at no time forced position or forced movements. A richly cellular, infiltrating glioma, approximately 2 by 4 cm. in its diameters, relatively scant in fibril production and containing numerous giant cells, involved the corpora quadrigemina almost symmetrically and the floor of the Sylvian aqueduct.

Military Surgeon, Washington, D. C.

February, XXX, No. 2, pp. 125-248

24 "Internationale Hygiene Ausstellung, Dresden, 1911." H. G. Beyer, U. S. N.
25 Mission of Ambulance Company. M. Ashford, U. S. A.
26 Foot and Foot Wear. F. W. Weed, U. S. A.
27 Immediate Clinical Results of Use of Salvarsan in Army. H. J. Nichols, U. S. A.
28 Some Dangers of Salvarsan. M. A. Reasoner and R. W. Matson, U. S. A.
29 Modification of Von Bergmann's Operation for Hydrocele. P. A. Surgeon, U. S. N.

Kentucky Medical Journal, Bowling Green

January 15, X, No. 2, pp. 57-96

30 *Few Reasons Why Drugs Do Not Cure Indigestion. H. N. Leavell, Louisville.
31 Arteriosclerosis. J. M. Morris, Louisville.
32 *Use of Vaccines in Treatment of Genito-Urinary Conditions. H. Bronner, Louisville.
33 Factors Which Contribute to Success in Modern Surgery. J. R. Wathen, Louisville.

30. **Why Drugs Do Not Cure Indigestion.**—Having no drugs by which we can stimulate normal cell activity, and no drugs by which we can influence the secretion of one organ except to the detriment of another, or the production of a pathologic lesion in the organ which is stimulated, Leavell says it can safely be asserted that medicines must necessarily play a minor rôle in the cure of indigestion. So far as pathologic lesions are concerned, they can have absoltuely no effect, for the reason that a lesion which is sufficient to cause enlargement of an organ may sooner or later, by metastasis, affect other organs, or by throwing out numberless adhesions, may produce acute intestinal obstruction.

32. **Vaccines in Genito-Urinary Conditions.**—After rather wide use of vaccines, Bronner has come to the conclusion that, in many suppurative conditions of the genito-urinary tract due to bacteria other than the gonococcus and the tubercle bacillus, where there is not a definite abscess formation, or where there is not some obstructive intervention, either sure or marked amelioration may be expected from vaccine therapy. These infections will include those due chiefly to the colon group, the staphylococcus and streptococcus.

Journal Medical Society of New Jersey, Orange

February, VIII, No. 9, pp. 449-502

34 Erysipelas in New-Born Infant. G. T. Welch, Passaic.
35 Urgent Conditions in Abdominal Surgery. J. W. Kennedy, Philadelphia.
36 Cancer of Breast. W. P. Glendon, Cedarville.
37 Our Duty to School Children. A. M. Heron, Lakewood.
38 Intravenous Injection of Salvarsan. F. A. Roberts, Newark.
39 Infantile Paralysis. F. P. Bowyer, Jersey City.
40 Symptomatology and Diagnosis of Infantile Paralysis. C. H. Finke, Jersey City.
41 Treatment of Infantile Paralysis. H. J. Bogardus, Jersey City.

Therapeutic Gazette, Detroit

February, XXVIII, No. 2, pp. 77-152

42 Treatment of Melena Neonatorum by Human Blood-Serum. W. R. Nicholson, Philadelphia.
43 *Normal Human Blood-Serum Injections in Melena Neonatorum and Other Conditions. J. E. Welch, New York.
44 Injuries of Shoulder and Their Relation to Some Conditions of Upper Extremity of Obscure Origin. T. T. Thomas, Philadelphia.
45 Factors Concerned in Process of Clotting of Blood. W. H. Howell, Baltimore.
46 Supplementary Home Treatment of Septic Wounds in Dispensary Work. S. W. Moorhead, Philadelphia.

43. **Treatment of Melena Neonatorum.**—As a forlorn hope, in fact without any real belief that any good would result, Nicholson determined to try the injection of normal human blood serum in his case. The father was used as the donor for the first injection. A little more than 20 c.c. was injected

into the tissue of the back. The next day 18 c.c. was injected in the morning and 10 c.c. at night. On the next day there was vaginal bleeding, but only 6 c.c. was injected, as the supply was temporarily low. The following day the cord separated in a perfectly normal manner; there had been no bleeding externally during the night, but the neck was discolored and swollen. Two doses were given on this day, the morning measuring 18 c.c. and the evening 14 c.c. On this same day a small swelling, which he believed to be a cephalhematoma, made its appearance. The next day the first normal stool was passed. The baby was evidently improving, and but 6 c.c. of serum was administered. A supply was kept in readiness for a couple of days, but was not used, as the child was free from any sign of active bleeding and the hematoma was decreasing in size. The weight was also increasing, and the temperature remained normal.

Northwest Medicine, Seattle, Wash.

February, IV, No. 2, pp. 35-68

47 Congenital Idiopathic Dilatation of Colon, Hirschsprung's Disease. J. F. Critchlow, Salt Lake City.
48 Lane's Kink; Report of Cases. M. M. Patton, Spokane, Wash.
49 Erosions of Stomach. N. W. Jones, Portland, Ore.
50 Diagnosis and Prognosis of Gastric Ulcer. W. O. Spencer, Portland, Ore.
51 Duodenal Ulcer. O. F. Lamson, Seattle, Wash.
52 Diagnostic Importance of Ocular Manifestations of Syphilis. E. E. Maxey, Boise, Idaho.
53 Treatment of Syphilis of Central Nervous System. W. T. Williamson, Portland, Ore.

New York Medical Journal

February 17, XCV, No. 7, pp. 313-364

54 *Indiscriminate Drug Taking. A. Lambert, New York.
55 Some Useful Household Medicaments. S. Solis-Cohen, Philadelphia.
56 Masturbation in Adult Male. M. Hühner, New York.
57 Crile's Researches in Regard to Shock. W. P. Carr, Washington, D. C.
58 Local Anesthesia in Major Surgery. A. S. Morrow, New York.
59 Matas Operation in Treatment of Traumatic Aneurysm. W. C. G. Kirchner, St. Louis.
60 Artificial Sterilization by Active Immunity with Spermatozoon from Same Species. L. K. Hirshberg, Baltimore.
61 Chronic Urethral Pruritus. G. Greenberg, New York.
62 *Acute Poliomyelitis with Unusual Manifestations. M. Greenwald, Jersey City.
63 Interstitial Ectopic Pregnancy. C. R. Robins, Richmond, Va.

54. Indiscriminate Drug Taking.—The danger of the formation of the habit of continually turning to some drug at the slightest pain, in the endeavor to benumb that pain, instead of finding out what caused it to arise, and taking the proper measures to remove the cause, Lambert rightly emphasizes as being a very great one. What we call diseases are really variations or perversions of the normal processes going on in the body and one or more of these processes may become perverted or changed, so that the resulting condition brought about in the body is vastly different from the normal condition and becomes harmful, and the resulting symptoms are what we designate as a disease. Consider for example, headaches, and the numerous remedies advertised, bought and taken for them; consider the many causes which give rise to headache; a disturbed digestion, sluggish circulation, tired out and overwrought nervous system, carelessness in personal hygiene permitting constipation, and various sicknesses or little ailments that constantly arise. If we remove the cause, the headaches will cease, and the great danger we have in turning to headache remedies is, that as the pain ceases we forget the cause, believing ourselves better, and go on permitting the morbid processes which caused the headache to persist in the body, until we have really allowed a little thing to run along until it may have become a serious condition. Beside the dangers to the blood from various of these aniline drugs, the incessant use is not without its dangers in habit formation.

Another cause which has brought about a wide-spread use of drugs is that of insomnia—and the hypnotics or sleep producers are probably the most abundantly used of all. The dangers of indiscriminate drugging are summed up as follows: It is often harmful, and usually unintelligently useless. The drugs in themselves frequently do harm, to say nothing of the waste involved in pouring in enormous quantities of these remedies to no purpose, since the reasons for which they are taken are often incorrect. Many of these remedies do harm, in that they actually injure and pervert the normal processes of the body. All narcotic drugs, those which benumb pain and the like, have the danger of real habit formation connected with their use, and when once a person is addicted to these drugs, the condition in which he finds himself is worse than the previous one for which they are taken. It is an old, trite saying of the medical profession that he who diagnosticates well will cure well, and this applies to each and every individual, whether he has taken a degree in medicine, or whether he has not, and certainly the indiscriminate drugging to which the human race is to so great an extent addicted to-day is not based on principles of good sense and intelligence.

62. Acute Poliomyelitis.—In Greenwald's case the infant was lying on its bed, deeply imbedded in pillows, with its head retracted and the spine arched backward, giving the impression of opisthotonos, but as he lifted the baby from the pillow, he found the head swaying laterally and anteroposteriorly, representing the typical "head drop" as illustrated by Sheffield.

Journal-Lancet, Minneapolis

February 15, XXXII, No. 4, pp. 85-110

64 Laboratory Methods in Syphilis: Wassermann Reaction. N. L. Linneman, Duluth, Minn.
65 Contribution of Spinal Fluid to Diagnosis of Syphilitic Diseases of Nervous System. C. R. Ball, St. Paul.
66 The New Public Health: Control of Infectious Diseases. H. W. Hill, Minneapolis.
67 Tubal Pregnancy: Report of Two Cases. W. H. Godfrey, Russell, N. Dak.

Interstate Medical Journal, St. Louis

February, XIX, No. 2, pp. 93-170

68 Chronic Infectious Endocarditis, with Early History Like Splenic Anemia. Sir W. Osler, London.
69 Vaccine Virus and Results of Vaccination in Public Schools of St. Louis, 1912. G. Dock and D. L. Harris, St. Louis.
70 Iodin in Surgery. H. A. Baldwin, Columbus, Ohio.
71 Hormonal in Intestinal Stasis. G. H. Hoxie, Kansas City, Mo.
72 *New Reflex Phenomenon in Hand: Wrist-Sign. C. G. Chaddock, St. Louis.
73 Transduodenal Choledochotomy. J. H. Fobes, New York.
74 *Hemorrhagic Infarct of Small Intestine. L. H. Hempelmann, St. Louis.

72. Wrist-Sign.—The area on the wrist which seemed to Chaddock to correspond anatomically with the external malleolar skin-area is located on the palmar surface of the wrist at the junction of the palm with the wrist, and just at the ulnar side of the tendon of the flexor carpi radialis and the tendon of the palmaris longus, evident as a groove or depression when the hand and fingers are in moderate flexion. His experiments have seemed to show that from the skin of this groove, as far distally as the base of the thenar eminence in the palm and proximally an inch or so up the bend of the wrist, a peculiar reflex movement can be excited in case of disease of the corresponding pyramidal tract at a level higher than related spinal centers in the cervical enlargement of the cord. Indeed, in a few instances, irritation of almost any area of the skin of the forearm, as high as the elbow on the ulnar side, has induced the movement described. The form of irritation Chaddock has used is scratching with a dull-pointed orangewood stick, or with a dull-pointed nail-file. In a few cases, pressure with the point of the instrument, without scratching, has proved effective. The movement observed consists of flexion of the wrist and simultaneous extension and separation of all the digits. In certain cases this movement occurs slowly and the resulting attitude is maintained for a few moments while the stimulus is continued; in other cases, it occurs very quickly and sharply, even occasionally with observable nervous tremor. In addition to this movement there is frequently, if not invariably, a simultaneous contraction of the triceps muscle, limited to a few of its middle fibers, as a rule, but in some cases amounting to a decided bulging of the whole muscle. There is here a certain correspondence with the movement of thigh-muscles excitable from the sole and external malleolar skin-area; and also that the induction of this movement, in some cases, from a wide area of the skin of the forearm, is analogous to abnormal toe-signs excitable from extensive skin-areas of the lower extremities. It seems to be due to active reflex contraction of the flexors of the wrist (with excitation of the triceps), while the separation

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and extension of the digits is apparently often a passive mechanical result. However, in some cases there has been evidence of some active contraction of the extensors of the digits, shown most clearly in wide separation of them, especially of thumb and little finger. There is in this movement no action of the interossei or lumbricales.

74. **Infarct of Small Intestine.**—While the diagnosis of mesenteric thrombosis is always difficult and in many cases impossible, Hempelmann regards the following points as rather suggestive: 1. Sudden abdominal pain occurring in a patient beyond the third decade, the pain being either very violent from the very beginning or becoming progressively worse for several days. 2. The intense suffering of the patient often associated with writhing on the bed and nervous symptoms remotely suggesting hysteria combined with lack of rigidity and distention and a comparatively normal pulse and temperature. 3. Bloody vomiting and stools. 4. Demonstration of a source from which an embolus may have been derived, viz., endocarditis, phlebitis, etc. The treatment is surgical.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

February, XIV, No. 2, pp. 65-139

75 Kidney Infections Complicating Pregnancy. J. M. Tompkins, Richmond.
76 The Rest Treatment. B. R. Tucker, Richmond.
77 Nitrous Oxid-Oxygen Anesthesia. M. J. Alexander, Richmond.
78 Diagnosis of Poliomyelitis with Misleading Symptoms. T. A. Williams, Washington, D. C.

Annals of Surgery, Philadelphia

February, LV, No. 2, pp. 185-328

79 Parathyroids and Their Surgical Relation to Goiter. C. H. Mayo and B. F. McGrath, Rochester, Minn.
80 *Arteriovenous Anastomosis. Reversal of Circulation, as Preventive of Gangrene of Extremities. B. M. Bernheim, Baltimore.
81 Technic of Suturing Blood-Vessels with a New Instrument. J. S. Horsley, Richmond, Va.
82 *Division and Circular Suture of Aorta in Pregnant Cats. W. M. Boothby and A. Ehrenfried, Boston.
83 *Observations on Series of Forty-Three Laminectomies. C. A. Elsberg, New York.
84 Prophylaxis and Treatment of Epithelioma of Lower Lip. D. W. Montgomery and G. D. Culver, San Francisco.
85 *Acute, Spontaneous Perforation of Biliary System into Free Peritoneal Cavity. C. A. McWilliams, New York.
86 Error of Overlooking Ureteral or Renal Calculus Under Diagnosis of Appendicitis. M. H. Richardson, Boston.
87 Surgical Treatment of Diverticula of Urinary Bladder. W. Lerche, St. Paul, Minn.
88 *Primary Tuberculosis of Penis. G. H. Wilson and A. S. Warthin, Ann Arbor, Mich.
89 Mesothelliomata (So-Called Hypernephromata) of Kidney. L. B. Wilson, Rochester, Minn.

80. **Arteriovenous Anastomosis.**—Six cases are cited by Bernheim and forty-six recorded in the literature are reviewed. In studying these fifty-two cases, Bernheim found that thirty-eight were done on males, ten on females and in four the sex was not stated. The ages varied all the way from 20 to 80 years. Fifteen out of the fifty-two cases must be considered successful ones; that is, cases in which the reversal, as far as one can judge, actually saved the limb from real or threatened gangrene, a percentage of 30 per cent. Among the failures there were thirteen deaths; two from shock and eleven from senility and erysipelas. Most of these patients were in a desperate condition physically at the time of operation, thus rendering an operative procedure precarious to say the least. In the remaining twenty-two cases the course of disease was uninfluenced by the reversal, although there was a temporary improvement in several cases. Amputation was performed in each instance. The operation was done twice in the upper extremity, once for thrombus and threatened gangrene, once for threatened gangrene, both times successfully. The remaining cases were in the leg, the operation being done four times for Raynaud's disease, once for sarcoma of the popliteal space, which necessitated removal of about 4 inches of the popliteal artery and vein, once for gun-shot wound and the remainder for real or threatened gangrene. As to methods of operation, the end-to-end suture of Carrel and Stich was done twenty-three times with eight successes, lateral anastomosis twelve times with four successes, invagination (end of artery into end of vein) twice with one success, and the intubation of Wieting (end of artery into side of vein) nine times with two successes. The method was not stated twice and one of these operations was successful.

82. **Division and Circular Suture of Aorta in Pregnant Cats.**—The authors were able to interrupt completely the circulation of the abdominal aorta in a pregnant cat for fifteen minutes, divide the aorta, perform a circular suture thereof, and reestablish the circulation without interfering with the course of the pregnancy.

83. **Series of Laminectomies.**—Among forty-three consecutive operations on the spine during the past two years, done mostly by the authors, laminectomy for tumor was performed in thirteen patients. Of the thirteen cases, nine were extramedullary and four were intramedullary growths. Of the extramedullary, the bone and muscles were involved in addition to the meninges in two patients, while in seven the tumor was entirely intradural. Of the latter, two were in the dorsal or lumbar cord, five involved the conus and the roots of the cauda equina. There were in all thirty-six primary laminectomies and seven secondary operations. In addition to the thirteen patients with spinal tumor, there was one with a collection of fluid (arachnoid cyst?). Posterior root section was done ten times; extirpation of diseased bone pressing on the cord twice; a peculiar disease of the posterior nerve-roots was encountered in one patient; two patients had an acute osteomyelitis of the vertebræ; one, a fracture dislocation; there were eight exploratory operations.

85. **Spontaneous Perforation of Biliary System.**—In 3,180 operations on the biliary system, acute spontaneous perforation into the free peritoneal cavity occurred twenty-nine times, or 0.9 per cent. In ninety cases of perforation, eighty-two of them, or 91 per cent., occurred in the gall-bladder, three, or 3.3 per cent., perforated through the cystic duct, four, or 4.4 per cent., through the common duct, while but one, or 1.1 per cent., perforated through the hepatic duct. Calculi are a great factor in causing perforation, for in eighty out of 108 cases, or 74 per cent., stones were found at the time of the operations. In fourteen cases, or 13 per cent., it was found that no stones were present after adequate search. In the fourteen remaining cases, or 13 per cent., stones may or may not have been present as no mention is made of them. In but nine cases is it distinctly stated that gangrene was present. Of ninety-nine patients whose ages are given, the average was 50 years. Before 50 years, there were forty-four cases with 63 per cent. of recoveries, while beyond 50 years there were fifty-five cases with 46 per cent. of recoveries. Between 50 and 60 years, there were thirty-five cases with but fourteen recoveries. Sixty-two of the cases occurred in women, or 60 per cent., and they stand the disease better than men, the mortality in women being 44 per cent. as against 54 per cent. in men. Of 108 patients operated on, fifty-six recovered, or 51 per cent., while fifty-two died, or 48 per cent. Early operation, McWilliams says, as in all forms of peritonitis, is the best guarantee of success; thus, of seven patients operated on within twelve hours of the perforation six, or 85 per cent. recovered; of fifteen operated on within one day of the perforation, ten, or 66 per cent., recovered; of fourteen within two days, seven recovered, or 50 per cent.; of sixteen operated on within three days of the perforation, eight recovered, or 50 per cent.; while of ten patients that had gone four days before operation only two recovered, or 20 per cent. Suture of the perforation is to be unhesitatingly condemned. Four out of five patients thus treated died. Simple incision of the abdomen with drainage of the biliary region gave 47 per cent. of recoveries. With cholecystectomy 48 per cent. recovered. The best results were obtained with cholecystostomy, with which 61 per cent. recovered.

88. **Tuberculosis of Penis.**—It is pointed out by the authors that though primary tuberculosis of the penis is comparatively rare, it is probably more common than might be judged from the literature. It is possible that many cases of primary tuberculosis of the penis have been mistaken for syphilis, chancroid and cancer. Tuberculosis following ritual circumcision is less common at the present time than formerly, and no doubt due to changes in the ritual, the practice of suction having been abolished. The two cases which Wilson reports are due to unclean surgery. The tubercle bacilli were evi-

dently carried from the patient who had been operated on just previously to the wounds of both circumcised patients by unclean hands or improperly sterilized instruments or other articles used in the operation. Both cases are examples of wound-infection by the tubercle bacilli. That both boys were well and had at no time shown any symptoms or signs of tuberculosis up to the time of operation; that the parents were both well; that the operations were performed by the same surgeon, at the same place and time; and that preceding the operations a tuberculous patient had been operated on, leave no room for doubt concerning this mode of infection. A case of primary tuberculosis of foreskin is also reported.

Illinois Medical Journal, Springfield

February, XXI, No. 2, pp. 123-260

90 Therapeutic Application of Solid Carbon Dioxid. W. A. Pusey, Chicago.
91 Skiagraphy in Urologic Diagnosis. R. D. Carman, St. Louis.
92 Skin Sensitization. E. L. McEwen, Chicago.
93 Bilirubinuria: Clinical Choluria. B. G. R. Williams, Paris.
94 Fistula of Rectum. C. J. Drueck, Chicago.
95 Internal Secretions, with Special Reference to Islets of Langerhans of Pancreas. G. B. Schwachtgen, Aurora.
96 Treatment of Compound Fractures. C. Beck, Chicago.
97 Rupture of Parturient Uterus. H. M. Stowe, Chicago.
98 Treatment of Diffuse Suppurative Peritonitis. O. M. Steffenson, Chicago.
99 Intestinal Strangulation: Report of Cases. J. E. Miller, Pittsfield.
100 Poliomyelitis. L. B. Russell, Hoopeston.
101 Why Lack of Interest in Obstetrics? E. A. Cook, Alton.

Southern Medical Journal, Nashville, Tenn.

February, V, No. 1, pp. 1-88

102 *Vaccine Therapy in Typhoid. J. B. Elliott, New Orleans.
103 *Stokes-Adams Syndrome. J. G. Gaither, Oxford, Miss.
104 Sanitation in Southern Cities. C. A. Mohr, Mobile, Ala.
105 Dispensary Work in Mississippi. W. S. Leathers, University, Miss.
106 Training of Specialist. M. M. Cullom, Nashville.
107 Congenital Morphinism, with Report of Cases. G. E. Pettey, Memphis, Tenn.
108 Two Cases of Foreign Body in Right Bronchus Removed by Superior Bronchoscopy. C. A. Thigpen, Montgomery, Ala.
109 Technic for Compression of Lung in Pulmonary Tuberculosis. M. E. Lapham, Highlands, N. C.
110 End-Result of Operation in Exophthalmic Goiter. G. W. Crile, Cleveland.
111 Surgery of Intestines: Report of Seventeen Cases with Recovery. E. M. Prince, Birmingham, Ala.
112 Plea for Use of Nitrous Oxid in Short Operations. G. S. Foster, Manchester, N. H.
113 *Case of Congenital Gangrene of Right Forearm, with Successful Amputation, in Infant Five Days Old. R. Winslow, Baltimore.
114 Important Factors in Prophylaxis of Malarial Fevers. C. F. Craig, Washington, D. C.

102 and 103. Abstracted in THE JOURNAL, Dec. 2, 1911, pp. 1860 and 1861.

113. Congenital Gangrene of Right Forearm.—The labor in Winslow's case was natural and of twelve hours duration: position of the child in utero L. O. A. Labor was unimpeded and the cord was not wrapped around the neck or arm; neither were any amniotic or other bands noticed. The head was born and the arm followed normally; the child was not cyanosed and cried lustily. The right arm was gangrenous almost up to the elbow, with a distinct line of demarcation already formed. There was no sign of cord pressure or of pressure of any kind. The child's weight at birth was 5½ pounds. When five days old there was complete moist gangrene of the hand and forearm, which were considerably swollen, and a somewhat irregular line of demarcation had formed a short distance below the right elbow. It was not judged safe to administer an anesthetic and the amputation was made at the elbow joint without any anesthesia. The child cried some, but bore the operation very well, and became quiet when supplied with a bottle full of milk. He was sent back home on the next train, a distance of forty miles. He did well, gained weight rapidly, and the stump had entirely healed in three weeks. Unfortunately, he died when two months of age of cholera infantum.

Louisville Monthly Journal of Medicine and Surgery, Ky.

February, XVIII, No. 2, pp. 257-288

115 Deafness. Its Cause and Newest Treatment. H. E. Cook, New York.
116 Colon, Sigmoid and Rectum. G. S. Hanes, Louisville.
117 Postpartum Hemorrhage. R. J. Estill, Lexington.
118 Plea for More Practical Laboratory Research. F. E. Sondern, New York.
119 Secret Division of Fees. E. F. Smith, New York.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 10, 1, No. 2667, pp. 285-344

1 Prognosis. T. F. Gardner.
2 Early Diagnosis of Pulmonary Tuberculosis. F. W. Price.
3 Influence of Strong, Prevalent, Rain-Bearing Winds on Course of Phthisis. W. Gordon.
4 *Prevention and Treatment of Pulmonary Tuberculosis. W. M. Crofton.
5 Clinical Trials with Marmorek's Antituberculosis Serum. J. P. Mitchell.
6 Nature of Parasites of Leprosy and Tuberculosis. A. G. R. Foulerton.
7 Case of Actinomycosis of Lung. F. Nicholson.

4. Treatment of Pulmonary Tuberculosis.—Crofton has for years been using iodoform in the treatment of tuberculosis, giving it intravenously, intramuscularly and by the mouth. The intravenous method, he says, is by far the most potent. It is given in quantities of ¼ to 1 grain dissolved in ether, with a little liquid paraffin added, two to five times a week. The veins usually selected are those of the antecubital fossa. The little operation is a simple one. There is no pain or inconvenience to the patient, except a certain amount of coughing. Even in advanced cases with large involvement, Crofton says he has succeeded in getting the temperature normal, greatly reducing and sometimes abolishing the expectoration and improving the cough. He thinks that one of its chief actions is the well-known action of iodin in converting toxin into toxoid, which is not poisonous, but acts as an excellent stimulant and for the formation of antitoxin. The power that an injection of iodoform has in abolishing a reaction after an injection of tuberculin would tend to confirm this hypothesis. He regards it as essential, before ending the treatment of a case, to give a series of injections of tuberculin, in order to increase the patient's immunity and if possible to leave him with, at any rate, the mechanism for producing specific antibodies with ease. Otherwise the patient has no guarantee that he will be able to resist the reinfection that he is almost certain to get. He usually gives it combined with iodoform, the latter being given with the idea of reducing the reaction. It is a very powerful preparation, the initial dose being a millionth of a milligram and the largest dose used is a thousandth of a milligram. That the iodoform does reduce reaction he has proved by giving a patient several doses of the combination without a reaction and then giving it without the iodoform, when a reaction occurred.

Lancet, London

February 10, 1, No. 4, pp. 343-412

8 Certain Chronic Glandular Enlargements. W. K. Hunter.
9 Amputation for Diabetic Gangrene. C. B. Lockwood.
10 *Treatment of Puerperal Infection by Bacterial Vaccines. G. T. Western.
11 *Vaccine Treatment of Simple Goiter. R. McCarrison.
12 Fate of Appendix After Abscess Formation. A. P. Dodds-Parker.
13 *Case of Tuberculosis with Special Involvement of Heart. P. Bahr and G. C. Low.
14 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

10. Bacterial Vaccines in Puerperal Infection.—Out of 100 cases studied by Western, twenty-five followed on miscarriage. In only two of these was a history obtained of criminal interference. Blood cultures were made in almost every case. Eight to ten cc. of blood is obtained by venipuncture and inoculated into tubes of ordinary glycerin and glucose broth. These are incubated at 37.6 C. for four days before being reported as negative. In ninety-six cases in which the blood was examined a positive result was obtained in thirty-nine, or 40 per cent. Of the thirty-nine positive results, thirty-six contained streptococci and of these all but two were grown aerobically. Two cases grew *Staphylococcus aureus* and one case grew a Gram-negative coccus which failed to grow in subculture. The two *Staphylococcus aureus* cases were both following abortion, in one instance criminally induced. Cultures were taken from the uterus in forty-three cases in this series. In thirty-one instances streptococci were grown in pure culture. Twice streptococci grew in large numbers, together with a few colonies of coliform bacilli, which were no doubt contaminations from the vagina or cervix. On one

occasion *Staphylococcus albus* alone grew and on one occasion the cultures were noted contaminated. In only seven cases were the results completely negative and there is reason to believe that in some instances this was due to faulty technic. It will be seen, therefore, that streptococci occurred in 80 per cent. of the cases examined and in 76 per cent. in pure culture.

Forty-four patients in this series were not treated by vaccines. Of the fifty-six patients so treated thirty-eight lived while eighteen died, giving a mortality of 32 per cent. Of the forty-four patients untreated twenty lived while twenty-four died, giving a mortality of 55 per cent. The cases are divided by Western into three groups: 1. Those which respond at once to an inoculation of a vaccine, the temperature falling to normal within forty-eight hours. 2. They may respond to each of a series of injections, the average of the six four-hourly temperatures falling a degree or so. 3. The temperature may steady until the daily maximum is not above 102. Further injections fail to reduce this. In these cases there is probably a local collection of pus which must be found and drained; the temperature will then quickly fall to normal.

Western concludes that the mortality among those patients with puerperal septicemia in which there is definite bacteriologic evidence of bacteria in the blood-stream is from 85 to 95 per cent. This mortality may, by inoculation with autogenous vaccines, be reduced to about 55 per cent. The mortality among notified cases of puerperal fever is about 60 per cent. This mortality may by inoculation with appropriate vaccines be reduced to about 30 per cent. In cases of puerperal sepsis, if it is decided to explore the uterine cavity the opportunity should not be lost of obtaining a culture at the same time. In the treatment of puerperal sepsis "stock" vaccines give inferior results and should only be used when an autogenous vaccine cannot be obtained.

11. **Treatment of Goiter.**—Having shown in the course of his researches on the etiology of endemic goiter that the infecting agent of this disease exists in the intestinal tract and that a plentiful amebic infection was present in this situation in the vast majority of all cases of goiter in Gilgit, McCarrison has been engaged in endeavoring to cultivate amebas from the feces of sufferers from this disease. During the course of this work he was struck with the constant character of the bacillary growths which appeared in the medium employed. This medium was that recommended by Musgrave for the cultivation of amebas. The vaccine employed was, therefore, a composite one and contained organisms capable of growth on an alkaline and feebly nitrogenous medium. This vaccine was administered in selected cases in doses of from 150,000,000 to 350,000,000; the inoculations were made at intervals of from seven to ten days. The results obtained were most gratifying.

McCarrison has treated thirty-three cases of simple goiter by means of vaccine. The cases were selected. The results observed may be summarized as follows: Of the four vaccines which were successfully employed the "composite" vaccine appears to be the best. An initial dose of 150,000,000 proved to be most suitable in the case of the composite vaccine and in the case of that prepared from the coliform bacillus found in the feces. There is usually some rise of temperature a few hours after the inoculation, but this is rarely of any severity if the initial dose does not exceed 150,000,000. Subsequent dosage can be readily regulated by the effect of the treatment on the enlarged thyroid. When the gland begins to soften and the skin over it to become lax the dose which has brought about the result will not need to be increased at the subsequent inoculations. McCarrison believes, also, that the volume of the vaccine inoculated should be small, and that it is better to introduce 150,000,000 of the bacteria in 5 minims of salt solution than in 1 c.c. of the same solution. The local reaction does not then appear to be so marked, and when the upper arm is selected as the site of inoculation the patient is usually able to follow his ordinary avocation with no more loss of time than that necessary to attend at the laboratory for the treatment. Cases vary considerably as to the number of inoculations which are necessary to effect a cure. As a general rule, the older the goiter the larger the number of inoculations which will be needed. As a rule, however, from four to seven inoculations were found to be necessary. This treatment is suitable for cases of recent parenchymatous goiter and its value is confined to such cases. It has little or no effect when the goiter is of long standing, that is to say, when the main part of the swelling is made up of adenomata or of cysts. In some cases a shrinking of the thyroid tissue around adenomatous or cystic masses is observed, but no diminution in the size of these masses has been noted to occur.

13. **Tuberculosis With Special Involvement of Heart.**—The left ventricle, perhaps more so than the other chambers of the heart, was, in the authors' case, greatly diminished in size owing to an enormous, more or less concentric, hypertrophy of the ventricular wall. The myocardium was replaced by caseous, cheesy masses of different sizes, these having produced the nodular or marble-like lumps seen on the outside of the heart during the necropsy. The wall at the base of the ventricle measured no less than 1¾ inches in thickness, this gradually tapering to ¾ inch at the apex. Practically no normal muscular tissue was left, the tubercular lesions having entirely replaced this. The right ventricle and both auricles were also affected, the cavity of the left auricle especially being surrounded and infiltrated by tubercular masses and thereby greatly obliterated. Remains of pericardium adherent and firmly bound to the auricles and great vessels at the base were easily found, but, as already mentioned, the pericardial membrane was, on the whole, quite free from tuberculous changes.

Practitioner, London

February, LXXXVIII, No. 2, pp. 217-352

15 Treatment of Primary Uterine Displacements. W. B. Bell.
16 Cellulitis of Hand. E. M. Corner.
17 Relation of Ductless Glands to Glycosuria. P. J. Cammidge.
18 Peribronchial Phthisis. A. C. Jordan.
19 Minor Operation of Gastrostomy. H. Upcott.
20 Nitroglycerin Poisoning. R. R. Pirrie.
21 Cause, Effect, Incidence and Prevention of Pneumokoniosis of Quarts Miners. J. S. Purdy.
22 Postoperative Treatment of Cancer. F. Hernaman-Johnson.
23 Retrospect of Otology, 1911. M. Yearsley.
24 Moral Factor in Physical Disease. A. J. Brock.
25 Hyoscin-Morphin Anesthesia in General Practice. A. Innes.
26 Diagnosis and Treatment of Mucous Colitis and Spastic Constipation. H. Higgins.
27 Pre-Operative Management of Acute Abdomen. C. H. Whiteford.
28 Case of Septicemia Cured by Vaccine. R. W. Mullock.
29 Ionization and Bier's Hyperemia in Treatment of Rheumatism. J. L. Timmins.

British Journal of Children's Diseases, London

February, IX, No. 98, pp. 49-96

30 *Observations on Nervous Manifestations in Rheumatism of Childhood. F. J. Poynton.
31 *Series of Manifestations of Acute Rheumatism in Boy of 10. R. B. Ness.

30. **Nervous Manifestations in Rheumatism.**—A series of 500 consecutive cases of rheumatism are analyzed by Poynton. In this series he has placed all cases of chorea that came to him during the period over which the investigation took place. He has taken all these cases of chorea as rheumatic and then critically examined the evidence for making such an assumption. Of the 500 cases of rheumatism, 225 came with chorea as one or the only symptom. None has been considered twice, although there were a considerable number of relapsing cases. In eight the notes were imperfect and useless, leaving only 217 for analysis; 122 of these patients had obvious heart disease and many of them other symptoms of rheumatism; twenty-eight more had no convincing signs of organic valvular disease, but were suffering from rheumatic arthritis and pains; 150 of the number are thus disposed of. The remaining sixty-seven cases came to the hospital with no gross heart disease, but twenty-two of them with what Poynton regarded as evidence of dilatation. They showed, however, no arthritis or other cardinal evidence of the rheumatic state.

In fifty-two of the sixty-seven cases, there was no history of fright or strain that the parents could discover. Seven, Poynton traced later as suffering from rheumatic heart disease and one of these who came originally for chorea, with absolutely no guide as to its cause, died three years later of

rheumatic carditis. Another is now in the same hospital, in the last stage of chronic rheumatic heart disease; and another developed rheumatic arthritis in the hospital after admission. In ten of the cases chorea directly followed a sore throat. In one case the mother had suffered from chorea, which might be interpreted to suit any view if it had not been that two sisters had also suffered from chorea and one from rheumatic fever. In nineteen cases Poynton found a history of rheumatic fever in the family.

Eight of the fifteen ascribed to fright and shock were directly attributed to overstrain at school, and in one of them two attacks were looked on as the result of canings; but it was admitted that the boy had been troublesome and inattentive for some days beforehand. One case was supposed to result from the sight of two men fighting. One was ascribed to a fall in which the child injured an eye, but the chorea did not follow until twelve months later. One was attributed to a dog jumping up at the child, the chorea following some weeks later. One developed four days after the patient had seen her brother strike her father. It is noteworthy that the father had suffered from two attacks of rheumatic fever, and that some years later this child was treated for heart disease. One very suggestive case followed within a week the overturning by the patient of a perambulator with two small children in it. It must be added that a sister suffered from rheumatic fever. One case followed on a boy putting a penny into a machine in return for which he was rewarded with an electric shock. In the last case, a runaway horse came straight for a little girl and so frightened her that she was brought back in a "fit" and two days later developed chorea. This record supports what many authorities have long maintained, that the main cause of chorea is rheumatism and even reduced the question of fright and brain strain to the position of being interpreted as the active factor in producing the actually developed disease in tissues already unstable with rheumatism.

31. **Unusual Case of Acute Rheumatism.**—A boy, aged 10 years, was first admitted to the infirmary with a history of having suffered eight weeks previously from pain and swelling in his ankles, knees, shoulders, elbows and hands. The larger joints improved within a few days, but those of the hands remained affected for several weeks. Five weeks after the onset of the illness several little round nodules were felt on the back of the head, which persisted till the time of his admission to hospital. Previously he had not suffered from rheumatism. He had never had tonsillitis, chorea, or scarlet fever. The mother was said to suffer from rheumatism in her hands; otherwise the family history was unimportant.

What deserves special notice was the presence of numerous small subcutaneous fibroid nodules. These were most numerous and largest in the head, chiefly in the occipital region, though one or two could be felt also in the parietal regions. They were present, too, on the elbows over the condyles and on the oleeranon processes; on the wrists over the ends of the ulna and radii and along the tendons of the flexor muscles; on the hands over the metacarpophalangeal points and to a less extent over the interphalangeal joints; on the legs they were found over the knees at the sides of the patella, and on the ankles over the internal and external malleoli. They were absent in other positions where such nodules are often found, for example, on the scapula, the spines of the vertebræ and the crests of the ilia. In the various situations first mentioned one or two or more nodules were to be found. In size they varied from that of small shot to that of split-peas; a few were even larger. They were subcutaneous and easily felt, but only distinctly seen when the skin was stretched over them as when a joint was flexed. They were firm and hard but not tender; nor was the overlying skin reddened or in any other way involved.

The various joints said to have been previously affected were neither swollen nor painful. The arthritis had practically disappeared. The patient also suffered from endocarditis leading to mitral regurgitation, with slight hypertrophy and dilatation of the chambers of the heart on both sides. These facts were of special importance in view of the later developments. The examination of the respiratory, digestive, nervous and genito-urinary systems revealed no abnormality of any importance. Under treatment the nodules gradually became smaller and were all gone before he was dismissed on March 31. He was readmitted to the hospital one month later with severe chorea. He had only been at the convalescent home a week when one evening he got a fright through the breaking of a window in his bedroom, after which he remained nervous and sleepless all night, thinking of robbers. When he went home a week later the mother says he was twitching all over and could not speak properly.

A fortnight after this he was again readmitted to the hospital. The choreiform movements were then very bad and affected the whole body. He could not speak and was very emotional. He was thinner and paler than when he left the hospital. The rheumatic nodules had reappeared. They were in the same situations as before, were quite as numerous and in some parts, e. g., the occiput, even larger. The cardiac condition was practically as before. The patient was treated by absolute rest and suitable diet. Chloral hydrate and ammonium bromid as sedatives were given as required, while acetosalicylic acid was given regularly in view of the rheumatic condition. By the end of three weeks the sedatives were stopped but the acetosalicylic acid was continued for two or three weeks longer, after which the syrups of iodid of iron and of lactophosphate of lime were substituted. By this time all trace of the chorea and nodules had gone. At the end of about eight weeks he complained of pain over the heart. Next day pericardial friction was detected so that another link, in the form of pericarditis, had to be added to the chain of rheumatic events. Shortly after the onset of the pericarditis the rheumatic nodules again appeared, but not to the same extent. Within four or five days signs of left pleural effusion were detected and the right border of cardiac dulness was found 2 inches to the right of the mid-line; this was ascribed to displacement of the heart. The signs of the effusion were more marked on the following day. This pleurisy was another link in the rheumatic series. The patient had two slight recurrences of the chorea. Rest in bed and acetosalicylic acid stopped the recurrences very promptly. When he was dismissed from the hospital he was very well except for the cardiac lesion.

Australian Medical Journal, Melbourne

December 23, I, No. 23, pp. 241-250

32 Artificial Hypospadias for Relief of Intractable Urethral Stricture. R. H. Russell.
33 Serum Sickness. W. R. Groves.
34 How Far Is Momburg's Aortic Tourniquet Applicable to Military Surgery? T. Fiaschi.
35 Management and Treatment of Early Insanity. M. H. Downey.
36 Some Results of Lacerated Uterine Cervix. T. Murphy.

December 30, I, No. 24, pp. 251-260

37 Surgical Treatment of Uterine Retrodisplacements with Results of Operation. A. N. McArthur.
38 District Midwifery Practice. E. Ludowici.

January 6, I, No. 25, pp. 261-272

39 Cause and Treatment of Summer Diarrhea in Children A. J. Wood.
40 Plea for Mongol. T. E. Green.

Journal of Tropical Medicine and Hygiene

February, XV, No. 3, pp. 33-48

41 Possible Etiologic Factors in Malarial Recurrences; Significance of Such Cases; Their Treatment. G. E. Henson.
42 Persistence of Eosinophilia and Persistence of Absence of Embryos in Peripheral Blood in Case of Filaria Loa Infection. G. C. Low.

Annales de Gynécologie et d'Obstétrique, Paris

January, XXXIX, No. 1, pp. 1-64

43 Mechanism of Spontaneous Delivery with Shoulder Presentation. (A propos des differents mécanismes de l'évolution spontanée dans la présentation de l'épaule.) Berthaut.
44 Lumbar Puncture in Treatment of Eclampsia; Three Cases; Recovery. (De la ponction lombaire comme moyen curatif de l'éclampsie.) T. Bataski.

Archives Générales de Chirurgie, Paris

January, VI, No. 1, pp. 1-124

45 Ligation of Thyroid Arteries for Exophthalmic Goiter. G. Michel.
46 Pancreatic Cyst. (Cas de kyste pancréatique.) Le Moniet.
47 Operative Treatment of Adhesive Pericarditis. (Le traitement chirurgical de la médiastino-péricardite adhésive.) A. Rives.
48 Appendicitic Inflammation of Psoas Iliacus. (L'iliopsoite appendiculaire.) P. Mauclaire and Amaudrut.

Archives Générales de Médecine, Paris

January, XCI, No. 1, pp. 1-96

49 Pleurisy Without Effusion in the Tuberculous. (Interlobites sèches et pleurites en bouton de chemise chez les phtisiques.) C. Sabourin.

50 *The Chest Measure and Tuberculosis. (Tour de poitrine et poitrinaires.) B. Marcou.

51 *Infection of the Rhinopharynx. (Les infections rhino-pharyngiennes.) P. Gallois.

50. **The Chest Measure and Predisposition to Tuberculosis.**—Marcou has been examining the records of a large Russian life insurance society for the last twenty-five years to ascertain the later history of policy-holders with the so-called phthisical chest, and has found that they have not developed tuberculosis since their acceptance by the society any more than persons with broad chests; rather the reverse. He insists that the "phthisical chest" is the result of and does not precede the tuberculosis. The course of the disease modifies the shape of the chest so that the chest measure becomes reduced; what has been accepted hitherto as having of course existed before the tuberculosis, should be regarded as a consequence of the disease. He says that in the three types of chest, the long and narrow, the broad and the deep, the length or depth compensates for the lacking breadth, so that a long narrow chest may have more actual lung area than the broad chest. He regards the thin "longiform" applicants as better risks than the robust "latiforms," on the basis of the society records and his own observation. When tuberculosis is once installed, the muscles become weak and flabby generally, but especially the chest muscles, from a reflex mechanism similar to the atrophy of muscles with joint lesions. The atrophy of the muscles favors kyphosis, and the ribs sink in as the muscles and diaphragm become more and more atrophied, while the tendency to sclerosis of the lungs and pleura aids in the sinking in of the chest walls. The bones lose their firmness on account of the general demineralization of the organism. The entire chest grows slowly but surely smaller and smaller, until the chest measure may be 25 per cent. less than what it was before. Marcou declares that any one is liable to contract tuberculosis if he is overworked, badly fed, has drinking habits, or even if he is merely unhappy—whether his chest is broad or narrow. And if he becomes tuberculous, the shape of his chest will have no influence on the progress of his disease; the narrow-chested tuberculous are just as likely to throw off the disease and recover as the broad-chested.

51. **Infections in the Rhinopharynx.**—Gallois thinks that not enough attention has been paid to the rhinopharynx as the primary seat of disease. He seems to regard it as the "source of all evil," citing authorities to show that a primary infectious process in the rhinopharynx has been demonstrated in numbers of cases of acute articular and chronic rheumatism, endocarditis, nephritis, chorea, phlebitis, slow fevers, pulmonary, glandular and bone tuberculosis, etc. He has been looking over old records and has been impressed with the casual mention of a sore throat as having preceded the typhoid, the nephritis or other infection, although the writer at the time never noticed the connection between them. The infectious process in the rhinopharynx may induce actual septicemia; a chronic attenuated form may entail chronic lymphatism. One of his patients had a hypertrophic rhinitis which required cauterization occasionally, and each time this was followed by an attack of rheumatism. Another patient developed deforming rheumatism following a sinusitis of the antrum of Highmore. It is more usual, however, for the chronic rheumatism to develop in consequence of bronchitis, the connection suggesting actual metastasis. Attacks of gout are also liable to follow a grippal rhinopharyngitis. For these and other reasons he advocates systematic sterilization of the rhinopharynx at the first signs of trouble or in prophylaxis. He orders a spray of 1 per cent. phenol in the acute cases, following this with a spray of two parts each of phenol, sodium salicylate and sodium biborate in 500 parts water, and a 2 per cent. spray of boric acid or sodium biborate in the chronic cases. The main point is to spray through the nose, not the mouth, and the spray should be used daily, cleansing out the nasal passages as regularly as the face is washed. When the rhinopharyngitis is not accompanied by much secretion, but dry crusts form in the nose, he applies a salve, generally a mixture of 5 parts boric acid and 0.1 part balsam of Peru in 20 parts vaselin. He does not approve of menthol for the purpose, finding it too irritating. He has the salve applied on retiring at night or if it is for a child, possibly after the child is asleep. After any operation on the nose or throat, these measures are especially important and should be kept up systematically. Neglect of systematic sterilization of the rhinopharynx in this or some similar way explains the recurrence of adenoids, he is convinced. It is difficult to bring families to realize the necessity for continuing daily treatment when the child is well, but it should be impressed on them that this alone will ward off complications which it may be very difficult to cure.

Archives de Médecine des Enfants, Paris

February, XV, No. 2, pp. 81-160

52 Diuretic Action of Digitalin and Theobromin in Children. (Etude de l'action diurétique de la digitaline et de la théobromine chez l'enfant.) P. Nobécourt and G. Paisseau.

53 Purulent Pericarditis in Children. (De la péricardite purulente chez les enfants; péricardite traumatique.) V. Imervol.

54 Infant Welfare Organizations at Nice. (Création d'une Goutte de Lait par la Société protectrice de l'enfance de Nice.) A. Balestre and L. d'Oelsnitz.

55 Annular Livedo in Children. (La livedo annularis chez l'enfant.) Jourdanet.

56 Delirium in Children. (Les délires chez les enfants.) J. Comby.

Bulletin de l'Académie de Médecine, Paris

January 30, LXXVI, No. 5, pp. 101-111

57 *Treatment of Cerebrospinal Meningitis. (Contribution à l'étude du traitement de la méningite cérébrospinale.) Cantas and A. Netter.

57. **Serotherapy of Cerebrospinal Meningitis.**—Cantas found it impossible to inject the serum in the lumbar region, there being too much resistance to the needle, and the child having an attack of convulsions during the attempt. He had seen a child die under similar conditions, and he was convinced that there was some obstruction shutting off the lumbar region from the rest of the subarachnoid cavity. Consequently the next day he punctured at a higher point, between the first and second dorsal vertebræ, according to Jonnesco's technic for general spinal anesthesia. Cantas found it difficult to bend the child's head forward far enough, but finally succeeded, and then took ten minutes to inject 20 c.c. of the antimeningococcus serum. There was no spasmodic reaction, and the child began to improve the evening of the same day. Netter thinks that the difficulty in lumbar injection in these cases is the stratification of the purulent fluid, and that a difference in the composition of the fluid above and below does not imply a lack of communication between the canal at these parts. He makes a point of puncturing at the lowest feasible spot, reserving the usual puncture point in case the first puncture fails. He advocates puncture of the lateral ventricle in case of need, rather than the high dorsal puncture. In some cases when lumbar puncture only brought 2, 5 or 20 c.c., he obtained 40 to 120 c.c. from the ventricle, the chemical and histologic findings in each puncture fluid differing to such an extent as to confirm the lack of communication between the cavities.

Grèce Médicale, Syra, Greece

December, XIII, Nos. 23-24, pp. 45-48

58 Diphtheria Antitoxin in Treatment of Trachoma. (Sur un nouvel procédé au traitement du trachome.) G. M. Pachopos.

59 Phototherapy of Lupus. (La guérison du lupus par la lumière.) P. N. Divaris.

Journal de Chirurgie, Paris

December, VII, No. 12, pp. 653-782

60 Superiority of Remote Results of Transvesical Prostatectomy. (Les résultats éloignés de laparotomie dans l'hypertrophie de la prostate.) R. Proust.

Lyon Chirurgical, Lyons

February, VII, No. 2, pp. 121-240

61 Osteosarcoma of the Long Bones. (Deux cas de résection pour ostéosarcome présumé malin des os longs.) U. Guinard.

62 *Bladder Fistula from Impalement. (Empalement.—Fistule recto-urétrovésicale consécutive.—Guérison.) F. Gentil.

63 Primary Sporotrichosis of the Tibia with Necropsy. (A propos d'un cas de sporotrichose osseuse primitive suivi d'autopsie.) C. Lesieur and J. Marchand.
64 Catheterization of the Ureter in Girl of 7. (Cas de cathétérisme urétéral chez une fillette de 7 ans.) V. Rochet and J. Reynard.

62. **Impalement Accident.**—Gentil reports the case of a young man who fell from a revolving swing at an amusement park and was impaled on one of the pickets of the fence surrounding the concession. He was left with a chronic fistula into the urethra, bladder and rectum, but was finally cured by the end of the third year, after five operations.

Lyon Médical, Lyons

January 28, XLIV, No. 4, pp. 161-216

65 Negative Influence on Production of Milk of Subcutaneous Injections of Milk. According to Nolf. (Recherches sur l'influence dite galactogène des injections sous-cutanées de lait.) P. Chatin and R. Rendu.

Presse Médicale, Paris

January 31, XX, No. 9, pp. 93-100

66 Sporotrichosis of the Eye. (Sporotrichose oculaire.) F. de Lapersonne.
67 Research on Nephritis. (A propos d'un article sur les albuminuries leucopathiques.) J. Castaigne.
68 Hemoglobinuria. J. Camus and P. Pagniez.

February 3, No. 10, pp. 101-112

69 Direct Inspection of Interior of Stomach. (De l'examen gastroscopique; sa technique et sa valeur clinique.) E. J. Moure.
70 Angioneurotic Edema During Gonorrhea. (Oedème aigu angioneurotique au cours du rhumatisme blennorrhagique.) L. Gallavardin and Delachanal.

Revue Médicale de la Suisse Romande, Geneva

January, XXXII, No. 1, pp. 1-108

71 *Remote Results of Tuberculin in Treatment of Tuberculosis. Jaquerod.
72 Salvarsan in Syphilis; 282 Cases. (De la syphilis.) Dind.
73 Professional Secrecy (Le secret médical.) J. Moraz. (Le secret médical en obstétrique et gynécologie.) M. Muret.

71. **Tuberculin Treatment of Tuberculosis.**—Jaquerod gave forty-six patients systematic courses of Koch's old tuberculin and states that the results were excellent in the chronic torpid and afebrile cases, the tuberculous affection in the second stage. Ten of the patients have been completely cured for more than seven years and ten for more than six. In six cases the tuberculin had no effect; in ten it seemed to do harm, but twenty-four of the patients entirely recovered and nine were essentially improved. His experience has taught him that any tendency to fever should be regarded as a strict contra-indication, and he thinks that the tuberculin is not needed and is superfluous in the first stage of tuberculosis.

Revue Mens. de Gyn. d'Obstétrique et de Pédiatrie, Paris

January, VII, No. 1, pp. 1-80

74 Effect on Uterus of Allowing Parturients to Get Up Early. (De la mobilisation précoce des accouchées et, en particulier, de son influence sur l'involution et sur la statique de l'utérus.) L. Pierra.
75 Disturbances and Findings with Tracheobronchial Lymphadenitis in Young Children. (Caractères des troubles respiratoires et des images radioscopiques dans l'adénopathie trachéo-bronchique de la première enfance.) L. d'Oelsnitz.
76 *Fatal Mercurial Poisoning from Intra-Uterine Injection. (Mort par intoxication mercurielle après un avortement criminel.) G. Baux and E. Roques.

76. **Fatal Mercurial Poisoning from Intra-Uterine Injection.**—In the case reported by Baux and Roques the woman had made the intra-uterine injection herself for criminal abortion, using a solution of mercuric chlorid of unknown strength, at about the third month of pregnancy. She died in ten days after a syndrome of mercurial poisoning, stomatitis, enteritis and anuria, and persisting singultus and tremor. The midwife called to the case the next day, the abortion having been induced, combated the hemorrhage by vaginal injection of a hot 1 per 4,000 mercurial solution, which probably added still further to the intoxication.

Semaine Médicale, Paris

February 7, XXXII, No. 6, pp. 61-72

77 Text of the New International Sanitary Convention. (Texte de la nouvelle Convention sanitaire internationale portant règlement pour prévenir l'invasion et la propagation de la peste, du choléra et de la fièvre jaune.) Commenced in No. 4. Concluded in No. 7
78 The Speech Center. (Démonstration anatomique de l'indépendance de la troisième circonvolution frontale gauche des centres du langage articulé.) R. Sand.

Arbeiten a. d. interacad. Zentralinst. f. Hirnforschung, Vienna

XIX, No. 2, pp. 133-326

79 *Congenital Myatonia. (Zur Klinik und Pathologie der Myatonia congenita—Oppenheim.) O. Marburg.
80 Influence of Resection of Various Parts of the Brain on Vestibular Eye Reflexes. (Einfluss der Ausschaltung verschiedener Hirnabschnitte auf die vestibulären Augenreflexe.) J. Bauer and R. Leidler.
81 Swelling of Nerve (Brain) Tissue Soaked in Acid or Alkaline Fluids. (Studien über Quellung von Nervengewebe. II.) J. Bauer and T. Ames.
82 Comparative Anatomy of Lissauer's Tract. (Vergleichend-anatomische Studie über die Lissauersche Randzone des Hinterhorns.) O. Leszlenyi.
83 The Spinal Ganglia in Children. (Die Spinalganglien im Kindesalter.) J. Zappert.

79. **Congenital Myatonia.**—Marburg reports two cases with necropsy findings in one and compares them with similar cases on record. Everything seems to suggest, he says, that the condition is the result of an acute poliomyelitis affecting the fetus and leaving its unmistakable traces. Among the arguments presented to sustain this view, besides the histologic findings, is the fact that poliomyelitis was epidemic in Vienna at the time one of the children was born; also the tendency to progressive improvement which distinguishes this form of myatonia; also that it occurs singly, not in a familial type; also that the hypotonia is generalized while the atrophy is not prominent and the tendon reflexes are lacking, and the muscles do not give the typical reaction of degeneration; the galvanic response may be normal.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXII, No. 1, pp. 1-96. Last indexed February 17, p. 521

84 Spastic Conditions and Degeneration of the Neck and Chest Muscles in Causation and Diagnosis of Intrathoracic Disease. (Muskelspasmus und -Degeneration. Ihre Bedeutung für die Diagnose intrathoracischer Entzündung und als Kausalfaktor bei der Produktion von Veränderungen des knöchernen Thorax und leichte Tastpalpation.) F. M. Pottenger (Monrovia, Cal.).
85 Tuberculin Treatment of Latent Tuberculosis and Incipient Phthisis in Children. (Das Endotin—Tuberculin. purum—bei latenter Tuberkulose und Phthisis incipiens im Alter von 10 Jahren an.) D. Kurdjumoff.

Berliner klinische Wochenschrift

January 29, XLIX, No. 5, pp. 193-240

86 *The Poisonings at the Berlin Municipal Shelter. (Ueber die in der Weihnachtszeit 1911 in Berlin vorgekommenen Massenvergiftungen.) E. Stadelmann and A. Magnus-Levy.
87 Diabetes Possibly Result of Injury of Pancreas from Acute Infections. (Weitere Beiträge zur Aetiologie des Diabetes.) P. Hirschfeld.
88 Reaction of Degeneration in Sensory Nerves. (Ueber die "Entartungsreaktion" der sensiblen Nerven.) A. Adamkiewicz.
89 *Unfavorable Experiences with Spengler's I. K. Method in Ten Cases of Tuberculosis. (Erfahrungen mit C. Spengler's I. K.) O. Baer.
90 *Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. (Behandlung der Lungentuberkulose mit künstlichem Pneumothorax.) J. W. Samson. First part in No. 51, XLVIII.

86. **Methyl-Alcohol Poisoning.**—In this official report of the poisonings at the Berlin municipal shelter, Stadelmann emphasizes the strange latency of the syndrome in some cases, from one to three days having elapsed in some instances before any disturbance was felt, and then they might prove rapidly fatal. The eye findings were the most characteristic feature, the pupil being widely dilated and not reacting, accommodation impaired, and the patients complaining of scotoma and dimness or total loss of vision. When these eye findings were associated with extreme dyspnea, the patients generally rapidly succumbed. In the severer cases there were also intense cyanosis, convulsions, pain in stomach and abdomen and great restlessness. The patients did not smell of alcohol as a rule, and rebelled against taking any alcoholic stimulants. Motor disturbances were not noticed in any case; the temperature was always subnormal. Some of the patients developed extreme agitation or delirium twenty-four or thirty-six hours after the syndrome had apparently subsided. In treatment morphin seemed to give most relief, both subjectively and objectively, but the pupils did not contract under its influence; this occurred promptly, however, when eserin was instilled. Calomel given as a purge generally failed to act. See Berlin Letter, p. 358.

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89. **Unfavorable Experiences with Spengler's I. K.**—Baer reports ten cases of pulmonary tuberculosis in which he applied the Spengler preparation, but with decidedly unfavorable results. The patients lost appetite and weight, the cough and expectoration increased and tubercle bacilli were found in the sputum after long absence under the old and tried measures. The urine contained albumin and formed elements, and the patients complained of lassitude, headache and gastric pain, vomiting and reactions in the skin. In one case a long latent tendency to epilepsy seemed to be revived and the patient died in an epileptic dazed condition.

90. **Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis.**—Samson gives the details of six cases. His conclusions from this experience were summarized in THE JOURNAL, January 20, page 231.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

January 13, XV, No. 1, pp. 1-40

91 *Present Status of Operative Treatment of General Suppurative Peritonitis. (Der gegenwärtige Stand der chirurgischen Behandlung der diffusen eitrigen Peritonitis.) D. G. Zesas.

91. **General Suppurative Peritonitis.**—Zesas bases his review on 292 articles from the literature, but remarks that he had 2,000 other articles on general peritonitis at his disposal. He sifts the various views and methods of operative treatment, showing how the Americans have led the way to better results, the principle for treatment now followed by the most successful surgeons being Dieulafoy's: "We never repent of having interfered too soon, but we often have to regret not having interfered sooner," and Murphy's, "Get in quickly, get out quicker." Picqué's remark that "surgery is for the sick, not for the dying," is losing its force, as operative measures now snatch patients from the very jaws of death, although, as Krogius declares, the position of the surgeon called in too late is "anything but enviable." Zesas cites Clairmont's experimental research, which confirms the danger of absorption in the diaphragm region, and hence the advantages of postural drainage, keeping the patient partly sitting up, both during and after the operation. Zesas also cites authorities to confirm the advantages of iodin disinfection of the skin, as it avoids the scrubbing and manipulations inevitable with other methods of preparing the field of operation, liable to spread the infection, besides other disadvantages. Most of the German surgeons are still adherents of the rinsing technic, but the consensus of opinion now is preponderantly in favor of the Murphy method of refraining from interfering with the natural defensive forces of the peritoneum. Among those who have become converted to this view Zesas mentions Gerster, Eisendrath, Conte, Syme, Ross, Davis, Cuff, Harris and others. Injection of camphorated oil to prevent absorption has been done in sixty-three cases, according to Lenormand's compilation, and forty-three of the patients recovered; the theory on which this is based fails to take into account that in advanced peritonitis the absorbing power is much reduced. Glass drains expose to danger of pressure necrosis, and simple smooth rubber drains are generally considered the best. Proctoclysis is proving the best means to combat thirst and promote diuresis and effusion into the peritoneum, thus flushing the peritoneum from within outward. Application of superheated air seemed to hasten the fatal termination in Danielsen's animal experimentation; the hyperemia induced probably hastens absorption. On the other hand, Iselin has applied superheated air systematically for two years and a half and regards it as very valuable. Zesas suggests that the difference between the results in animals and in the clinic may be due to the fact that Iselin thoroughly rinsed out the abdominal cavity before applying the heat. Zesas cites Henle and others in regard to the use of peristaltic hormone in postoperative intestinal paresis, saying about the same as Aarou in his recent article in THE JOURNAL, Feb. 10, 1912, page 407. Zesas remarks that the general trend of opinion seems to be that puncture of the distended intestine or enterostomy is not advisable: "It is better to wait for the subsidence of the peritonitic infection without puncture or the like; after its subsidence the peristalsis starts up at once." [Zesas does not refer to Kuhn's recent work with injection of a sugar solution, mentioned in these columns February 24, for which Kuhn pleads as the biologic method of treating peritonitis, merely reenforcing Nature, not opposing or acting counter to her efforts.]

Correspondens-Blatt für Schweizer Aerste, Basel

February 1, XLII, No. 4, pp. 113-144

92 *Whooping-Cough. (Zur Aetiologie und Pathologie des Keuchhustens.) E. Döbeli.

92. **Whooping-Cough.**—Döbeli presents arguments to sustain his idea that whooping-cough is an ordinary catarrh of the upper air passages plus an imitated nervous spasmodic coughing. No child will develop actual whooping-cough, he says unless it has heard and possibly seen another child in an attack. The psychic factor is the principal one, and by training a child to resist and conquer a tendency to cough, it might be possible to develop a psychic immunity to pertussis so that the child would escape the disease even when others in its environment are affected.

Deutsche medizinische Wochenschrift, Berlin

February 1, XXXVIII, No. 5, pp. 201-248

93 *To Prevent Anaphylaxis in Serotherapy. (Methode, grössere Mengen artfremden Serums bei überempfindlichen Individuen zu injizieren.) E. Friedberger and S. Mita.
94 Antistreptococcus Serum by the Mouth and Desiccated. (Anwendung von Antistreptokokkenserum—Höchst—per os und lokal in Pulverform.) G. Spiess.
95 *Electrocardiography in General Practice. (Der Elektrokardiograph als Hilfsmittel für Diagnostik des praktischen Arztes.) G. F. Nicolai. Commenced in No. 4.
96 *Bloodless Enlargement of Nasal Passages. (Die unblutige Erweiterung der Nasenhöhlen.) G. Killian.
97 *Ischemic Paresis. (Zur ischämischen Lähmung bei Verschluss der Extremitätenarterien.) T. Aoyagi.
98 *Teleangiectatic Granuloma. (Das Granuloma teleangiectodes europeum, eine Protozoenkrankheit.) H. Schridde.
99 *Diagnosis of Chronic Gonorrhea in Women. (Zur Diagnose der chronischen Gonorrhoe des äusseren Urogenitale beim Weibe.) Dufaux.
100 Subjective Prophylaxis of Seasickness. (Technik der Seekrankheitstherapie.) E. Peters.
101 Venereal Disease in Brunswick. (Die Geschlechtskrankheiten im Herzogtum Braunschweig.) A. Grünspan.
102 System for Sociology. (Eine systematische Soziologie.) K. Müller-Lyer.

93. **To Avoid Anaphylaxis in Serotherapy.**—Friedberger and Mita found it possible to avoid all symptoms of anaphylaxis in experimental serotherapy with guinea-pigs by injecting the serum extremely slowly. They have devised a combination of three jars, containing paraffin and mercury, which permits very slow, drop intravenous injection. They found that the animals thus treated were able to tolerate far beyond the ordinary lethal dose.

95. **Electrocardiography.**—Nicolai is assistant at the second medical clinic at the Berlin Charité, and he has devised a comparatively simple apparatus for taking electrocardiograms. He expatiates here on the numerous new and important points which have been learned by this means, and commends it to the general practitioner and gives a number of tracings to show the standard types.

96. **Bloodless Enlarging of the Nasal Passages.**—Killian has been much pleased with the results of his method of infraction of the inferior turbinated bone. Until recently he always combined it with resection of the mucosa over the bone. The effect of this combined method has been most excellent, but in some cases it is unwise to do any cutting operation, and he has found that the infraction alone will answer the purpose almost as well, while the patients can be up and about as usual. By this means persons with heart or kidney disease, hemophilia and the elderly can be freed from their disturbances or materially relieved in the simplest and quickest manner. Under cocain-epinephrin local anesthesia, he forces the inferior turbinate outward, applying at various points the Luc forceps or a little spatula, of which he gives an illustration. A slight cracking noise is heard, and if the mucosa is crushed too hard there may be a few droplets of blood. A deviated nasal septum can be thus straightened, if there are no complications, and the infraction of the septum can be combined with infraction of both inferior turbinates. It is possible in this way at one sitting to open the passages and allow ample intake of air.

97. **Ischemic Paralysis from Obstruction of Arteries in the Limbs.**—Aoyagi reports a case of mitral stenosis with embol-

ism in the left femoral artery, and compares it with similar cases on record and others of postoperative ischemic paralysis. In the former the nerves seemed to be most injured, in the latter the muscles; and contracture develops early.

98. **Teleangiectatic Granuloma.**—Schridde reports a case with microscopic examination of the amputated finger, the findings sustaining the assumption that the lesion is the work of protozoa and is analogous to Oriental sore and Peruvian verruga.

99. **Diagnosis of Chronic Gonorrhea in Women.**—Dufaux refers especially to a gonorrheal process lurking in the urethra and external genitals, especially in the endo-urethral glands and the numerous glands opening into the vulva, when the affection has been apparently cured. In these minute glands and crypts the gonococci may still lurk until aroused by some special local hyperemia, menstruation or pregnancy. It is necessary to squeeze out the contents of the glands, and he has devised a little instrument for the purpose; it is shaped like a finger and answers the same purpose in forcing the contents out of the glands, while the back is hollowed out to catch the droplet of secretion expressed.

Medizinische Klinik, Berlin

January 28, VIII, No. 4, pp. 133-176 and Supplement

103 Lumbar Puncture in Diagnosis of Disease of the Brain and Spinal Cord. (Bedeutung der Lumbalpunktion für die Diagnose von Gehirn- und Rückenmarkskrankheiten.) Stertz.

104 The Moral and Mental Changes in the Tuberculous. (Der Seelenzustand der Tuberkulösen.) W. Weygandt. Commenced in No. 3.

105 Changes in the Senile Blood. (Typische, wenig gekannte Blutveränderungen im Senium.) W. Hammer, J. P. Kirch and H. Schlesinger.

106 Non-Tuberculous Shriveling of the Apex and Apical Tuberculous Processes. (Kollapsinduration und Tuberkulose der Lungenspitzen.) G. Maier.

107 Radium Emanations in Therapeutics. (Zur Frage der Anwendung grosser oder kleiner Dosen von Radiumemanation.) W. Benedikt.

108 *Treatment of Pneumonia. (Zur Frage der Pneumoniebehandlung.) W. Löwenstein.

109 Studies in Eugenics. (Moderne Gesichtspunkte in der Abstammungslehre.) V. Franz.

110 Pathology and Treatment of Diseases of the Larynx. (Erkrankungen des Kehlkopfs.) O. Frese.

February 4, No. 5, pp. 177-218

111 Interrelation Between Glands with Internal Secretion. (Wechselbeziehungen der Drüsen mit innerer Sekretion.) P. Fleischmann.

112 *Suture of the Vessels for Aneurysm. (Zur Behandlung der Aneurysmen mittels Gefässnaht—Ideale Aneurysmaoperation.) Wiewiorowski.

113 Salvarsan in Syphilis. (Ueber Kupierung initialer Syphilis mit Salvarsan.) J. Fabry and E. Jerzycki.

114 Respiratory Exercises in Treatment of Disease of Nose and Adjoining Organs. (Atemübungen als therapeutisches Hilfsmittel bei Erkrankungen der Nase und Nachbarorgane.) H. Reimers.

115 Wealth of Waters in Micro-Organisms. (Ueber den Reichtum der Gewässer an Kleinlebewesen.) R. Kolkwitz.

116 Vegetarian Diet. (Ueber die körperliche Anpassung des Menschen an die Ausnutzung pflanzlicher Nahrung.) H. Friedenthal.

108. **Large Doses of Digitalis in Treatment of Pneumonia.**—The text-books of late years have generally mentioned without comment the method of treating pneumonia with colossal doses of digitalis, introduced by Petrescu. Löwenstein has been applying the method systematically—although never venturing to use such high doses as Petrescu advocates—and reports eighty-two patients thus treated and compared with 110 under ordinary treatment. The mortality in the digitalis group was 20.7 per cent., while it was only 14.5 per cent. in the others. The patients were many of them elderly, and a number had other complications, explaining the high mortality, but the general impression is decidedly unfavorable to the Petrescu method.

112. **Ideal Operation for Aneurysm.**—That technic may be called ideal which restores the circulation through the vessel, and Küttner has recently performed a successful operation of the kind which is here reported and compared with the seventeen similar ones on record. Küttner's case is a further confirmation of the fine results obtainable by direct suture of the vessel even under apparently the most adverse conditions. He applied compression with a screw tourniquet at first, to reduce the aneurysm and aid in dilating the collaterals, and ascribes the successful outcome in large measure to this. The compression has to be applied very cautiously; Delbet has reported five ruptures and seventy-six cures in 111 cases of aneurysm in which compression was applied. The aneurysm in Küttner's case developed from a gunshot wound.

Münchener medizinische Wochenschrift

January 30, LIX, No. 5, pp. 233-288

117 *Bloodless Cure of Hemorrhoids. (Ueber die extraanale—unblutige—Behandlung der Hämorrhoiden.) I. Boas.

118 Mouse Cancers. (Bedeutung der Mäusekarzinome.) F. Henke.

119 Dog Sarcoma. (Zur Biologie des Rundzellensarkoms des Hundes.) E. v. Dungern.

120 Nitrogen Colloid of the Urine. (Ueber das stickstoffhaltige Kolloid des Harnes.) H. Pribram and J. Löwy.

121 Large Angiomas; Two Cases. (Zur Pathologie der Angiome.) G. E. Konjetzny.

122 Clinical Symptoms of Cerebral Cirsoid Angioma. (Die klinischen Symptome des zerebralen Rankenangioms.) R. Isenschmid.

123 Superior Strength of Wilm's Suture for Tendons. (Ueber Sehnennaht.) Kimura.

124 Action of Methyl Alcohol. (Wirkung des Methylalkohols.) R. Foerster.

125 *Sources of Error in Testing for Sugar. (Eine Fehlerquelle bei der Trommerschen Zuckerprobe.) N. Schulz.

126 *Benzin Poisoning of Infant. (Eine akute Benzinvergiftung beim Säugling.) A. Friediger.

127 *Ascending Peritonitis in Little Girls. (Ueber Peritonitis purulenta ascendens.) G. Mertens.

128 Superheated Air in Gynecology. (Heissluftbehandlung in der Gynäkologie.) H. Sieber.

129 Underfed School Children. (Hungernde Kinder?) M. Pfaundler.

130 The Doctor's Waiting Room. (Das Wartezimmer des Arztes.) H. Krauss.

117. **Extra-Anal, Non-Operative Treatment of Hemorrhoids.**—Boas has been applying in thirty cases the method of treatment he advocated in 1909, summarized in THE JOURNAL May 22, 1909, p. 1725. The principle is the reverse of the usual method of returning to the bowel the varicose nodules; he thinks we should imitate Nature, which aims to let the nodules stay outside and shrivel up. He accomplishes this by applying the suction bell, drawing the hemorrhoids out and causing the production around them of a ring of edema. The edema cushion shuts off the circulation and the nodules gradually shrivel away. In cases in which the edema does not form, it is hopeless to apply this method. He applies the suction for from thirty to sixty minutes, to make the edema permanent for a while. The patients have to stay in bed for one or two weeks; defecation is not interfered with. In every case the hemorrhages, prolapse and connected disturbances were cured at once, and the benefit was permanent in as large a proportion of cases as with the usual operative measures. There is nothing to prevent applying the method again in case of recurrence. He reiterates that it is unconditionally the best among all bloodless methods. It is entirely free from dangers and complications, and it is applicable in cases in which operative treatment is out of the question. Another advantage is that the method can be applied in the home. The painfulness of the method varies; it was rarely necessary in his cases to resort to an injection of morphin; in a few cases a sedative suppository relieved the patients. All pains subsided with the edema; he does not combat the edema at first, as otherwise the nodules might slip back inside the anus. By the third to the fifth day, the hemorrhoids had shrunk to half their former size or less.

125. **Source of Error in Trommer's Test for Sugar.**—Schulz warns that the reagents give a misleading reaction if they are used in reverse order; also if the boiling is kept up too long.

126. **Benzin Poisoning.**—Friediger was removing the plaster from extensive patches of rebellious eczema on an infant a month old, and loosened them with benzin, after which fresh plaster dressings were applied. The child developed symptoms of benzin poisoning, possibly from inhalation of the fumes and absorption from the traces left under the fresh plaster. The manifestations were mostly in the nervous system, and when seen twenty-four hours later the child seemed moribund, but rapidly recovered after being placed in a bran bath, gradually cooled.

127. **Ascending Purulent Peritonitis.**—Mertens states that all died of the twelve little girls with peritonitis from acute salpingitis whose cases were reported by Riedel. Mertens' own experience has been more favorable; he reports five cases in girls from 2 to 11 years old, and three of the children

recovered. The peritonitis had been preceded by a suppurative process in the genitals. Three of the children showed traces on the genitals of scratching, and it was known that the children had complained of itching; for this the oxyuris was probably responsible. The scratches became inflamed and the ascending peritonitis followed in time. He advises opening the abdominal cavity on both sides and tamponing down into the pouch of Douglas, treating at the same time the suppuration in the external genitals and eradicating the helminths.

Virchows Archiv, Berlin

January, CCVII, No. 1, pp. 1-160

131 Normal Involution of the Thymus. C. Barbano.
132 Pathologic Involution of the Thymus. (Thymusstudien. I. Auftreten von Fett in der Thymus.) K. Hart.
133 Unusual Concrements in Pyonephrosis. (Seltene Komplikation bei Pyonephrose.) H. Merkel.
134 Origin of Congenital Cystic Kidney. (Einige Bemerkungen über die Entstehung der angeborenen Zystenniere.) J. Hornowski.
135 *Disease of the Adrenals and Appendix in Connection with Fecal Obstruction. (Ueber den Zusammenhang von Nebennieren- und Appendixerkrankungen mit schweren Kotstauungen.) A. Brosch.
136 Atonic Dilatation of the Cecum. (Zur Kenntnis der anatomischen Formen der Typhlatonie.) A. Brosch.
137 Defective Bone Growth. (Zur Lehre der Osteogenesis imperfecta.) F. Fuchs.
138 Acromegaly. (Kurze Bemerkung zur Akromegaliefrage.) K. Petren.
139 Actinomycotic Peritonitis. (Zur Aktinomykose des Bauchfells.) K. Tiling.
140 Metastasis from Teratoma in Testicle. (Ueber ein metastasierendes Hodenteratom.) T. Mori.
141 *Diphtheritic Changes in the Heart Muscle. (Ueber die Veränderungen der Herzmuskulatur, vor allem des Atrioventrikularbündels bei Diphtherie; zugleich ein Beitrag zur Frage der Selbständigkeit des Bündels.) T. Tanaka.
142 Hemophilia in Cow. (Fall von Hämophilie beim Rinde.) A. Guillebeau.
143 Virulence and Cultivation of Avian Tubercle Bacilli. (Einiges über Wachstum und Virulenz des Erregers der Hühnertuberkulose.) W. Carl.
144 Spirochetes in Upper Air Passages and Gastro-Intestinal Tract. (Ueber Spirochäten und Spirochatösen der oberen Luft- und Verdauungswege.) P. H. Gerber.

135. Disease of the Adrenals and Appendix in Connection with Fecal Stasis.—Brosch after calling attention to the various mechanical ways in which the bowels can be obstructed by fecal stasis, says that the mechanical factors are generally secondary. He emphasizes the fact that a lesion, like a retroperitoneal tumor, can produce maximum contractions of the bowels by disturbing the innervation of the celiac ganglion. Animal experimentation has shown a center in the celiac plexus for inhibition of peristalsis. With atrophy of the celiac plexus there is liable to be diffuse dilatation of the stomach and intestine. With constriction of a spastic nature, the question arises what causes the preceding irritation of the celiac ganglion, and this leads to a consideration of the adrenal gland, on account of its nearness to the splanchnic nerve and because affections of this gland may, through the celiac ganglion, cause a spastic stenosis of the intestine. A case of his with softening of the medulla of the adrenal points to this. He also believes that the loss of the appendix with its tenacious secretion favors the drying out of the fecal matters and promotes their stagnation and consequent obstruction of the bowel. From this point of view children bear the loss of the appendix better than adults.

141. Changes in the Heart Muscle in Diphtheria.—Tanaka in consideration of the physiology and pathology of the bundle of His and the changes in Adams-Stokes disease, studied serial sections of the heart in fifteen children dying during or soon after an attack of diphtheria of the throat. He found that fatty degeneration was the most important change in the heart muscle, with hyaline degeneration of muscle fibers. Fragmentation was rare; intestinal myocarditis was found in six cases. Infiltration with leukocytes was present only as a symptom of the infection. In some cases the bundle of His showed fatty or hyaline degeneration, while the myocardium was nearly free from it, and vice versa, demonstrating a certain independence pathologically of the atrioventricular bundle. The sudden paralysis of the heart in diphtheria may be due to pathologic changes in the myocardium without there being any essential lesions in the bundle. In other cases the disturbance of the heart action and sudden paralysis of the heart may be explained by the changes found in the bundle of His.

Wiener klinische Wochenschrift

February 1, XXV, No. 5, pp. 191-226

145 Physiologic and Therapeutic Study of the Action of Light on the Skin. (Lichtwirkung auf die Haut.) L. Freund.
146 Microscopic Research on Bullous Dermatoses. III. (Ueber parasitäre Befunde in den Hautblasen und in der Milz bei Pemphigus vulgaris.) B. Lipschütz.
147 The Internal Secretion of the Mammary Glands. (Versuche über innere Sekretion der Brustdrüse.) A. L. Scherbak.
148 *Operative Treatment of Lung Disease. (Ueber operative Behandlung von Lungenkrankheiten.) E. Rochelt.
149 Favorable Action of Solution of Trypsin on Suppurative Processes: Fermentotherapy. (Wirkung von tryptischen Fermentlösungen auf örtliche chirurgische Tuberkulose und über die Antifermentbehandlung eitriger Prozesse.) M. Saidmann.
150 Reduction of Tuberculosis Mortality in District Surrounding Tuberculosis Sanatorium. (Bilden Heilstätten für Lungenkranke eine Gefahr für ihre Umgebung?) J. Sorgo.
151 Morbidity in the Printing Trades. (Die Morbidität im Wiener Buchdruckergewerbe.) S. Rosenfeld. Commenced in No. 4.

148. Operative Treatment of Lung Disease.—Rochelt remarks that when he published twenty-five years ago his first four cases of operative treatment of pulmonary lesions he could find on record only eight cases of surgical treatment of an abscess in the lung, five of gangrene and thirteen of bronchiectasia. Since then, however, numerous series have been published; Tuffier alone has reported sixty-six and Lenhartz 118 operations of the kind. Rochelt mentions a number of technical points learned from his and others' experience, and says of operative measures or artificial pneumothorax or other means of immobilizing the lung to cure cavities, that one of the main advantages is the protection of others against infection from the bacilli which the cavity bearers are generally scattering broadcast. If every tuberculous cavity can be systematically cured, without delay, a great advance in prophylaxis cannot fail to result, which is another powerful argument in favor of operative treatment of lung disease. He advocated years ago a valve drain which has proved extremely useful. A rubber film valve is fastened in a silver tube 1 cm. long. The silver tube is slipped into the mouth of an ordinary rubber drain tube and tied in place. The valve is pushed open by accumulating fluid behind or by air as the patient coughs, but the valve closes at once when the pressure is removed and thus prevents aspiration of air from without. The valve drain can be introduced through a trocar cannula inserted at the lowest point of the pleural cavity; this permits the incision above to be completely sutured, while effectually draining without danger of aspiration of air.

Zentralblatt für Chirurgie, Leipsic

February 3, XXXIX, No. 5, pp. 137-168

152 *Prevention of Atrophy of the Muscles After Injury of Joints. (Zur Verhütung des Muskelschwundes nach Gelenkverletzungen.) C. Hübscher.
153 *Experimental Exophthalmic Goiter. (Zur experimentellen Erzeugung des Morbus Basedowii.) E. Bircher.

152. Prevention of Atrophy of the Muscles After Injury of the Joints.—Hübscher says that any one can, with a little practice, contract certain muscles without moving the joint. This can be done most easily with the biceps in the arm and the quadriceps in the thigh, bringing them from the state of rest into active contraction. The muscle can thus be exercised systematically every hour even when the injured limb is wrapped up in dressings, and by this simple means the muscle is kept in a healthy condition. The advantages of the measure were abundantly demonstrated in the case of a young cavalry man whose spur caught and he hung suspended by it from a gate. The knee was not fractured, but laceration of the ligaments forbade active exercise. The young man was ordered to contract the musculature of the thigh fifty times at each stroke of the hour. He was intelligent and used to military discipline, and the results confirmed the efficacy of the measure in preventing all tendency to atrophy not only of the muscles, but of the entire neuromuscular element, the terminal neuron and the trophic tracts.

153. Experimental Exophthalmic Goiter.—Bircher gives an illustration of one of the five dogs in which he has induced typical and pronounced exophthalmic goiter by implanting in the abdomen pieces of thymus gland removed from patients; none of the patients had exophthalmic goiter. The exophthalmos was especially pronounced in the dogs.

Zentralblatt für Gynäkologie, Leipsic

February 3, XXXVI, No. 5, pp. 129-160

154 Epithelium in the Uterine Cervix. (Zur Frage des Epithels im Isthmus uteri.) E. Moritz.
155 Operative Treatment of Uterine Prolapse. (Zur operativen Behandlung der Prolapse des Uterus.) M. v. Holst.
156 *Early Symptom of Extra-Uterine Pregnancy. (Prühsymptom der Extra-uterin-Gravidität.) A. Solowij.

156. **Early Symptom of Extra-Uterine Pregnancy.**—Solowij found the pouch of Douglas apparently normal in examining a woman who complained of slight abdominal disturbance during the last few weeks, but was otherwise healthy. She had borne two children and menstruation had occurred last six weeks before. The uterus was slightly enlarged and to the left a small, longish, doughy and somewhat painful resistance could be felt; the pouch of Douglas was apparently normal. Three days later the findings were the same except that a doughy resistance could also be palpated in the pouch of Douglas. This sustained the presumption of tubal pregnancy, and it was confirmed by the operation, as also in a second, similar case, an irregular resistance developing in the pouch of Douglas which at first had been apparently normal. The condition of the pouch of Douglas is thus an index of an extra-uterine pregnancy.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 30, XXXII, No. 13, pp. 129-136

157 *Bilateral Spastic Paralysis in Three Brothers. (Interessante caso familiare di malattia di Little.) C. Lupi.

February 1, No. 14, pp. 137-144

158 Rupture of the Liver Tardily Simulating Liver Colic. (Rottura del fegato simulante la colica epatica.) G. Trotta.

157. **Bilateral Spastic Paralysis.**—In the family described by Lupi, three of the children had Little's disease associated with mental disease. The three brothers with the congenital spastic rigidity of the limbs are now in the thirties. The father had been addicted to liquor and died of apoplexy at 66. The mother is healthy, as also are the other four children.

Policlinico, Rome

January 28, XIX, No. 5, pp. 149-184

159 Postoperative Paresis of the Intestines. (Sull'Ileo postoperatorio.) L. Vaccari.

February 4, No. 6, pp. 185-224

160 *Thermoprecipitin Technic in Serodiagnosis. (La reazione della termoprecipitina come metodo generale di sierodiagnosi. Applicazione al mal rossino.) A. Ascoli.

160. **Thermoprecipitin Technic for Serodiagnosis.**—Ascoli calls attention to the importance in diagnosis of the resistance to heat of certain precipitins, especially those of anthrax in cattle and swine plague. The reaction is obtained in a few minutes by simply boiling a little of the material in three or five times the amount of physiologic salt solution and pouring the cooled filtrate on the precipitating serum. The ring and zone at the point of junction are characteristic for these two diseases in domestic animals, while with extracts from pellagra, septicemia and lymphadenitis the reaction is constantly negative.

Riforma Medica, Naples

January 6, XXVIII, No. 1, pp. 1-28

161 Tuberculosis of Stomach and Intestines. (Tubercolosi gastro-intestinale.) A. d'Antona.
162 Fibril Substance in Tumors. (Studio sulle gitterfasern dei tumori.) C. Martelli.
163 Blood Cyst in Axilla Excised as Supposed Recurrence of Mammary Cancer. (Cisti ematica del cavo ascellare simulante recidiva gangliare di un carcinoma mammario.) C. Mantelli.

January 13, No. 2, pp. 29-56

164 Normal Intestinal Digestion in Woman After Gastrectomy. (La digestione intestinale in una donna operata di gastrectomia.) G. Adamo.
165 Diplococcus Responsible for Vegetating Pemphigus. (Sulla etiologia e patogenesi del pemfigo vegetante.) P. Longo and A. Speciale.

Revista de Medicina y Cirugia, Havana

February 10, XVI, No. 3, pp. 63-90

166 *Beriberi in Cuba. (Contribucion al estudio del beri-beri.) M. G. Lebredo.
167 Present Status of Knowledge in Regard to Physiology of Blood. (Fisiologia de la sangre.) R. P. Vento. Commenced in No. 1.

166. **True and False Beriberi.**—Lebredo insists on the necessity for distinguishing true beriberi—which is observed in connection with inanition or deprivation of certain food elements—and a false beriberi which may present similar symptoms, especially the polyneuritis, but which differs essentially from the other. Beriberi has been epidemic at times in Cuba, he states, notably in times of famine and among the rural population collected in the cities during the war of independence. Cases of the false beriberi have also been encountered. He has recently had seven cases of acute beriberi among the inmates of the Santa Clara prison, all persons accustomed to a good and varied diet. Four of the patients died, the syndrome suggesting the cardiopulmonary type of beriberi, with precordial anguish and extreme dilatation of the heart; in one case 400 c.c. of effusion were found in the pericardium. He examined the rice used in the prison and was able to cultivate from the cooked rice a spore which occurred in large numbers and was resistant to heat, its vitality apparently unmodified by boiling for twenty minutes. In the boiled rice the spores grow into a shape like a cigar, the young spore in the tip taking the Gram stain, so the whole looks like a lighted cigar. Boiled rice seems its favorite culture medium, and the rice water proved fatal for rabbits when 10 c.c. was injected into the peritoneum, the animals succumbing in from two and a half to six hours, and with approximately the same cardiopulmonary symptoms. Rice from other lots did not produce any disturbance, although cooked and the fluid injected in the same way, even up to twice the amount. There did not seem to be any question of anaphylaxis. He gave the infected fluid to other animals by the mouth, but it produced no disturbance. Other animals with experimental gastritis, induced as a preliminary, developed fatal intoxication after ingestion of 10 c.c. of the rice water.

Hospitalstidende, Copenhagen

December 29, LIV, No. 52, pp. 1521-1556

168 Rebellious Neuralgia of the Mammæ Cured by Removal of Cystic Ovary and Correction of Retroversion of the Uterus. (Et Tilfælde af Mastodynl.) R. Hastrup.
169 Transformations of Bacterium Found in Urinary Passages. (En Undersøgelsesrække over Forandringer af en Urinbakterie, foregaaede i de menneskelige Urinveje.) E. Sörensen.

Norsk Magazin for Lægevidenskaben, Christiania

February, LXXIII, No. 2, pp. 147-200

170 Dulness with Small Effusions in the Pericardium. (Dæmpnings for holdene ved smaa væskeansamlinger i perikardiet.) S. Høyer.
171 Angioneuroses; Two Cases. (Akut paroxystisk ødem med dødelig forløb.—paa hereditær basis.—Symmetrisk gangræn.) F. Harbitz.
172 *Hypertrophy of the Heart. (Om hjertehypertrofi.) S. Widerøe.
173 *Paraffin in Treatment of Ozena. (Behandling av Ozæna med submukös injektion og implantation av paraffinum solidum.) S. Wetterstad.

172. **Hypertrophy of the Heart.**—Widerøe reports research on the comparative weight of the heart and of its ventricles in comparison to the general weight. He had 311 hearts thus examined; the most characteristic changes were those noted with valvular defects.

173. **Paraffin Treatment of Ozena.**—Wetterstad remarks that no instance is known in which injection of paraffin with a high melting point caused embolism while Eckstein has collected thirteen cases of embolism in the retinal artery or thrombosis of the ophthalmic vein which followed injection of paraffin with a low melting point. This paraffin method seems to be proving an effectual method of treating otherwise rebellious ozena, the submucous injection or implantation of a sheet of hard paraffin modifying conditions so that the vicious circle of the ozena is broken up. Wetterstad has treated ten patients with the injections alone and five with implantation of a sheet of paraffin. In some of the cases the ozena was of twenty or thirty years' standing. Three of the first group are entirely cured and the others show progressive improvement. In the second group three of the patients were much improved; the treatment was necessarily incomplete in the other cases. He cites the experience of nine other rhinologists, all but Burger reporting from 26 to 75 per cent. cured.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.